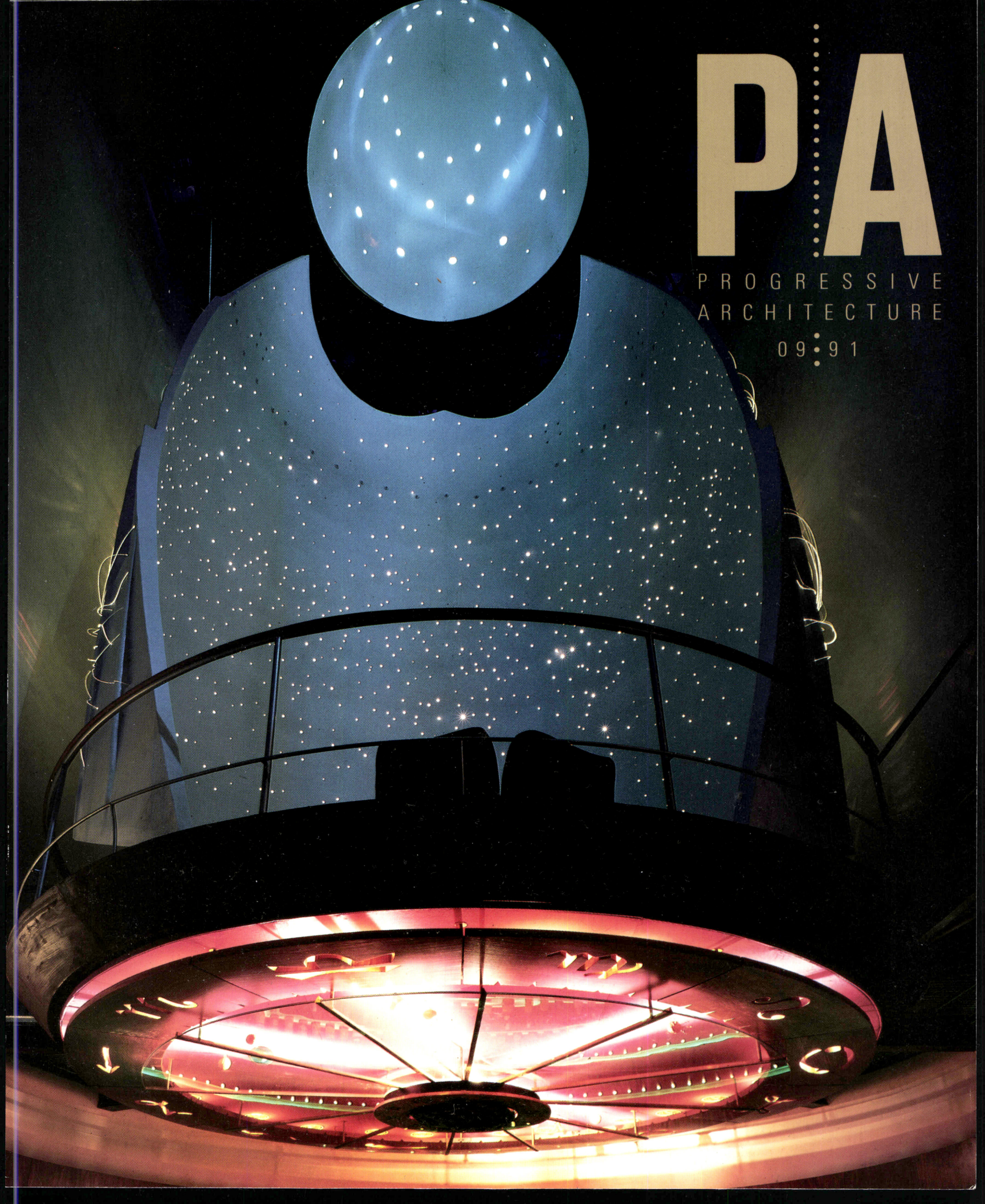


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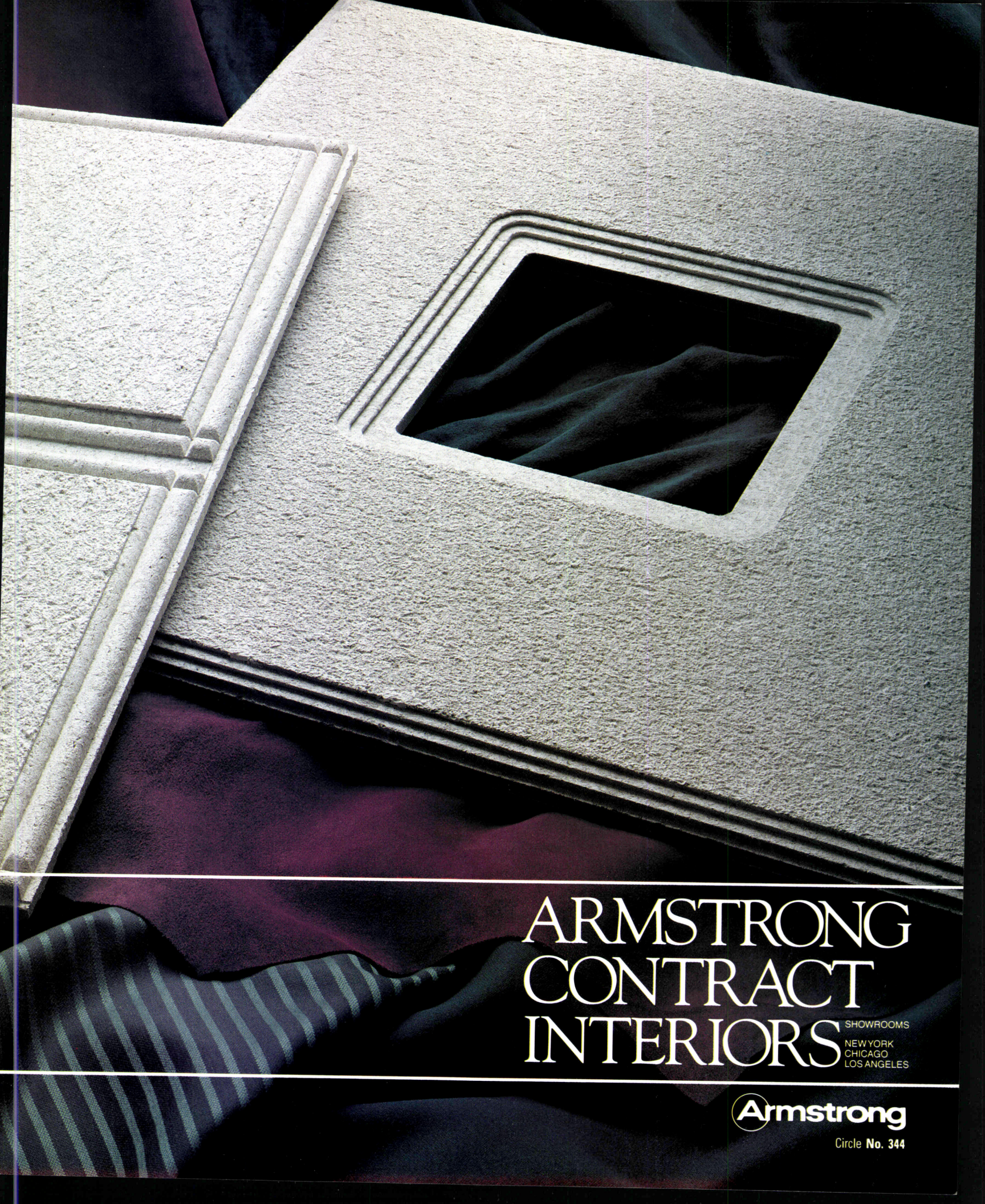
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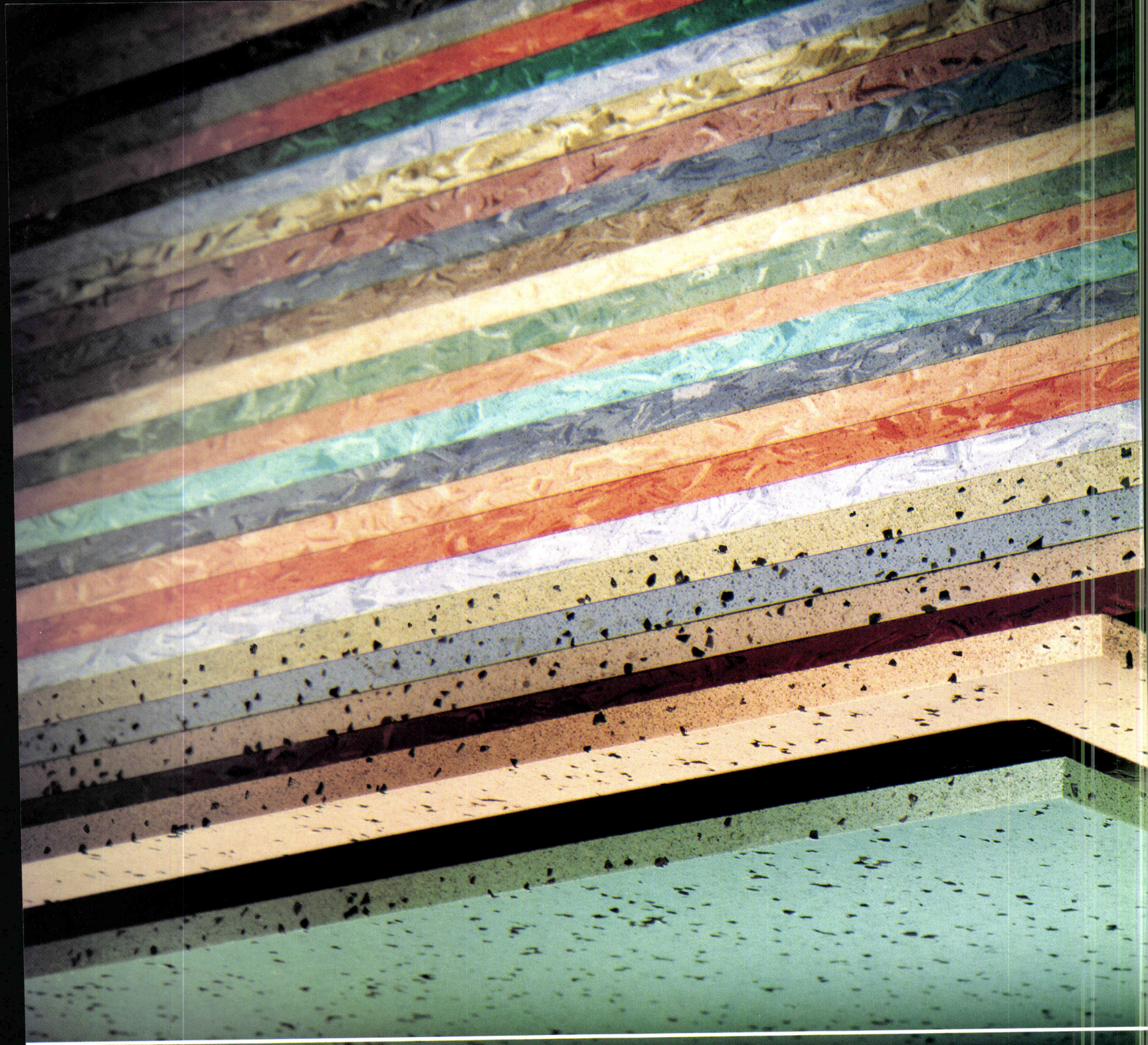
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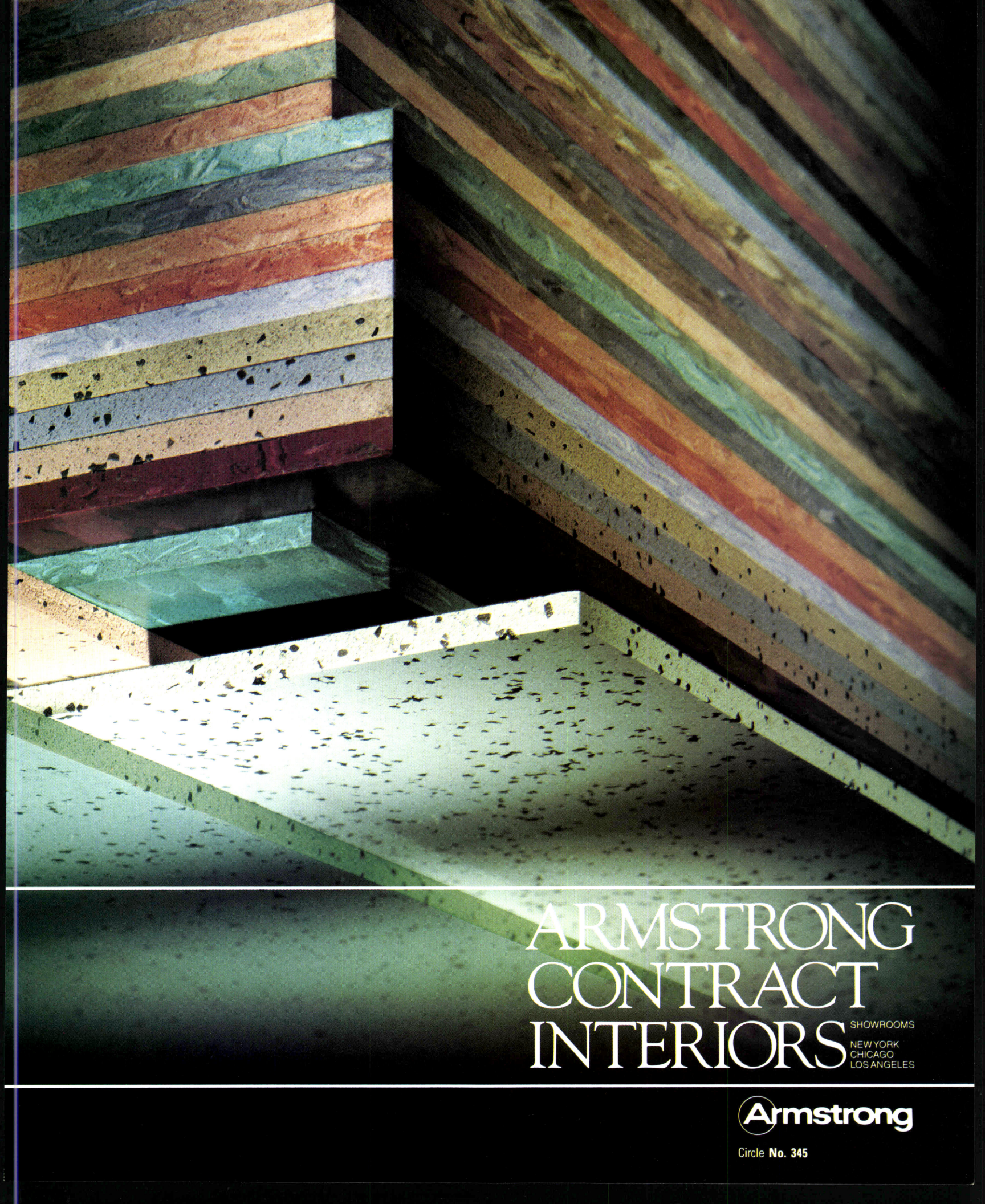
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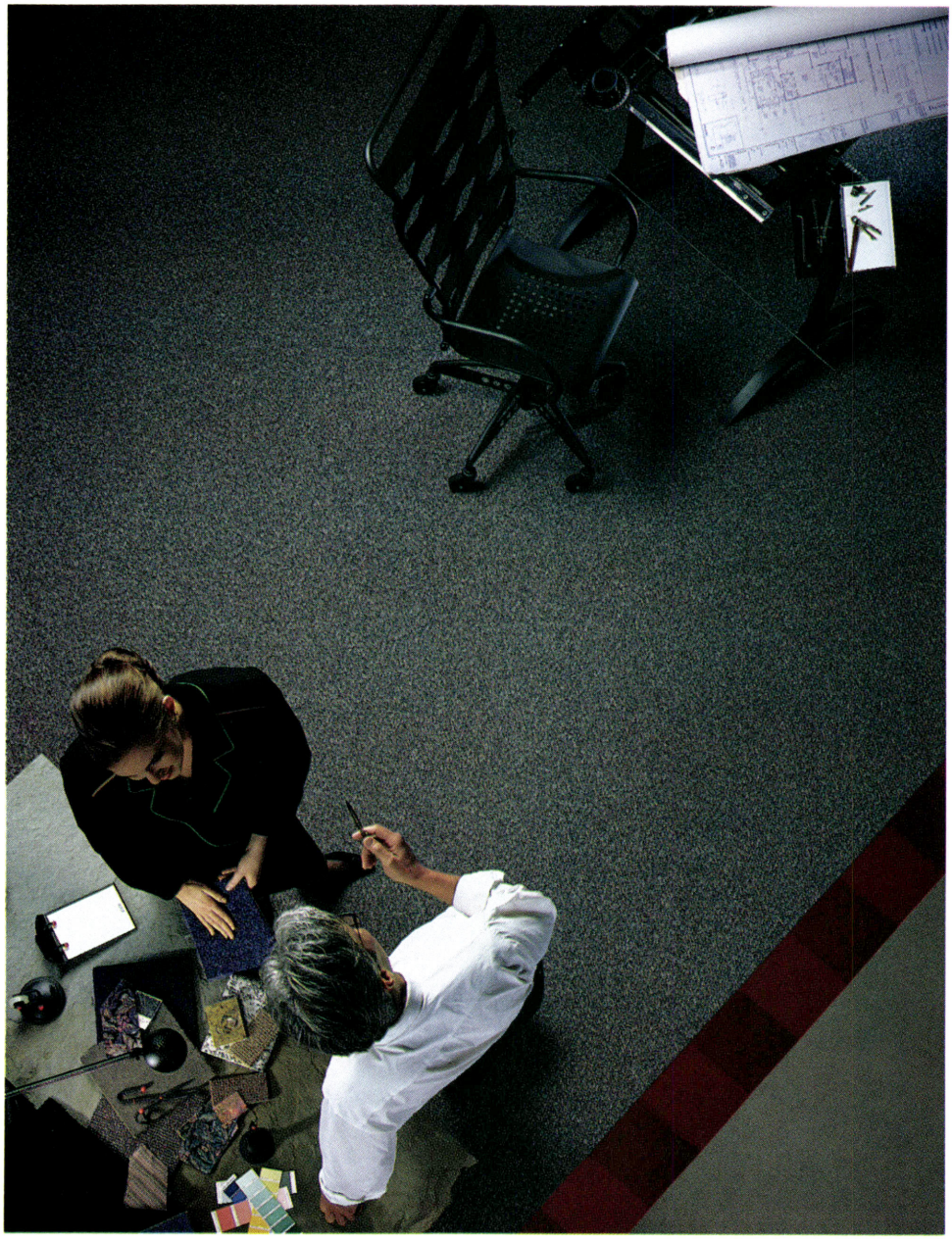


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Editorial
America Snubs Seville

The sad fate of the U.S. pavilion at Expo '92 reflects the government's short-sighted attitude toward the value of design.

It would seem only natural that the United States play a prominent role at Expo '92 in Seville, Spain. The first international exposition in 22 years, Expo '92 will serve as a kind of "coming-out party" for united Europe and a celebration of the 500th anniversary of Columbus's voyage from Spain to America. The event would seem to be of paramount importance for the U.S. The fair organizers thought as much, giving the U.S. a site matched in size and prominence only by those of Spain and Italy. The United States Information Agency, which is charged with coordinating U.S. exhibits at such expositions, apparently thought so, too, when they organized a competition to design the United States pavilion. But along the way, the USIA's commitment to a strong American design presence at Seville fell by the wayside.

In 1989, a design for the pavilion by Barton Myers Associates of Los Angeles was chosen from among those of nine prominent American firms. Myers's design consisted of a series of three steel-clad boxes containing exhibitions, plus an assortment of crowd-pleasing features, such as a water wall (representing the ocean Columbus crossed), three sun-tracking sails (to stand for Columbus's ships), a garden that would take visitors through the stages of development of the American landscape, and a forest of "cool towers" that would provide a breeze for visitors. The design was not universally applauded – in our own pages, associate editor Philip Arcidi suggested that it lacked exuberance and rigor (P/A, Feb. 1991, p. 90) – but it did constitute a solid example of American design well-suited to the Modernist bent of this exposition.

Financial problems plagued the project from the start: In the fall of 1989 the House of Representatives, led by Iowa Democrat Neal Smith, eliminated the $15 million already set aside for the pavilion. Smith – using the Reagan-era privatization line that led to such monuments-for-sale as Ellis Island (P/A, Nov. 1990, p. 23) – argued that private industry, which stands to gain from a united Europe, should pick up the tab. It was June of 1990 before Congress reversed itself, appropriating $13 million. By that time, though, "expo inflation" – a demand-driven increase in construction costs in Seville – had driven the estimated cost of the pavilion up from $12 million to $26 million. (There is some dispute among the parties involved over the accuracy of the original budget.) The search for exhibitors to make up the difference proved difficult, and so the USIA scrapped the Myers scheme.

In its place will rise two 1970s-vintage domes – veterans of past European trade shows – that the USIA happened to have in storage. Myers's Spanish affiliate, Carlos Langdon, has incorporated the domes into a new design, along with the water wall and tracking sails. The poignant image of the time-worn domes on their vast site, compared with those of the ambitious pavilions of Great Britain, France, and Japan, will imply a tired nation with little interest in the rest of the world.

What are the lessons of this fiasco? First, we can observe how much value our government places on design as a potentially significant export: The U.S. commissioner general for the exposition, Frederick Bush (no relation to the President), defended the scaled-down design by saying that "the message a nation delivers is a lot more important than . . . a piece of architecture." But as Benjamin Forgey pointed out in the *Washington Post,* the architecture is all that is remembered from most such fairs. As the European market for architecture and construction expands, our government should realize the importance of showing American design at its best, instead of trying to justify its own short-sighted expediency.

Which leads us to the second lesson, namely, that the architectural community – individual architects, the AIA, and the architectural press (ourselves included) – should have spoken up sooner and louder, when the pavilion was being held hostage in Congress. It was hard to believe at the time that Congress or the Bush Administration would not come through in the end, but we now know that we can never underestimate the ability of American bureaucrats and elected officials to trivialize architecture.

The final and most distressing lesson is that while the current administration's commitment to a "new world order" includes billions of dollars for a war whose objectives remain unclear, it begrudges a tiny fraction of that amount to be used toward the promotion of international trade and goodwill. If our government is designing a new world order that has more to do with Patriot missiles than with expressions of peaceful international cooperation, then it's time for America to go back to the drawing board.

Mark Alden Branch ■

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Views

Alexander's Manifesto

I am responding to Christopher Alexander's "Manifesto 1991" which appeared in the July 1991 issue (p. 100). I agree with his observation that the architectural profession is suffering from artificially constructed theories and that the results, as seen by the published works, show confusion and some of the designs are downright ugly. But his medicine, that "architects must see themselves as custodians of harmony in the world" does not sound very promising either. Isn't this the belief that led us to where we are today? Making the architect some kind of hero of the society started with Frank Lloyd Wright and went on with Gropius, Johnson, and so on.

Most of us were infected by this hero culture in the schools of architecture and felt like moral or social crusaders responsible for establishing a new world harmony. Maybe we should just try to be good professionals again, and stop crying for the public's understanding while pretending that there is a higher intellectual order in the works we do.

Emil J. Kish, Architect
Kensington, Maryland

Thank you for the article by Mr. Christopher Alexander (P/A, July 1991, p. 100). It is a pleasure and an inspiration to see this view of architecture so clearly articulated and in such an established publication.

As a graduate of Cooper Union, and therefore having been condescended to not just by Mr. Kenneth Frampton, but also by other esteemed figures in contemporary architecture, I was often shocked and sometimes horrified by the arrogance and the shallowness of the dogma given down to the students as if by a select priesthood of cognoscenti. Rather than persist in this course of martial architecture and stylistic one-up-manship, many of this generation of students of architecture, including myself, found solace and employment in construction and craftsmanship instead of an architect's office – wondering how and whether to reapproach the profession.

These concepts of harmony, morality, craft, economics, and community are missing from the profession in large part because they are missing from the schools. The internship, once intended as an apprenticeship with a skilled and experienced master builder/architect has become usually something less. Environmental concerns are too often disregarded as irrelevant to Good Design. This Alexandrian type of oath is a meaningful and potentially valuable idea.

Mr. Alexander has presented us with a worthy platform from which to reconsider the field of Architecture.

Harlan Levien, B. Arch.
Miami Beach, Florida

Habitat Credits

Regarding D.C. Habitat for Humanity (P/A, June 1991, p. 114), the project referred to includes a pair of houses, built in a five-day "blitz" construction. They were designed by John Sheridan, an architect who donated his time, with David Armitage and architecture graduate Cynthia Johnson. Executive Director of D.C. Habitat for Humanity is Demie Stathoplos.

Artist Credit

The designer of the whimsical tree guard and manhole cover (figures 1a and 1b, P/A, June 1991, p. 149) is Garth Edwards of Seattle.

Interiors Photo Credit

Credit is due to Todd Conversano for his photograph of the Goalen Group office, Culver City, California, Eric Owen Moss, architect. (P/A, May 1991, p. 105).



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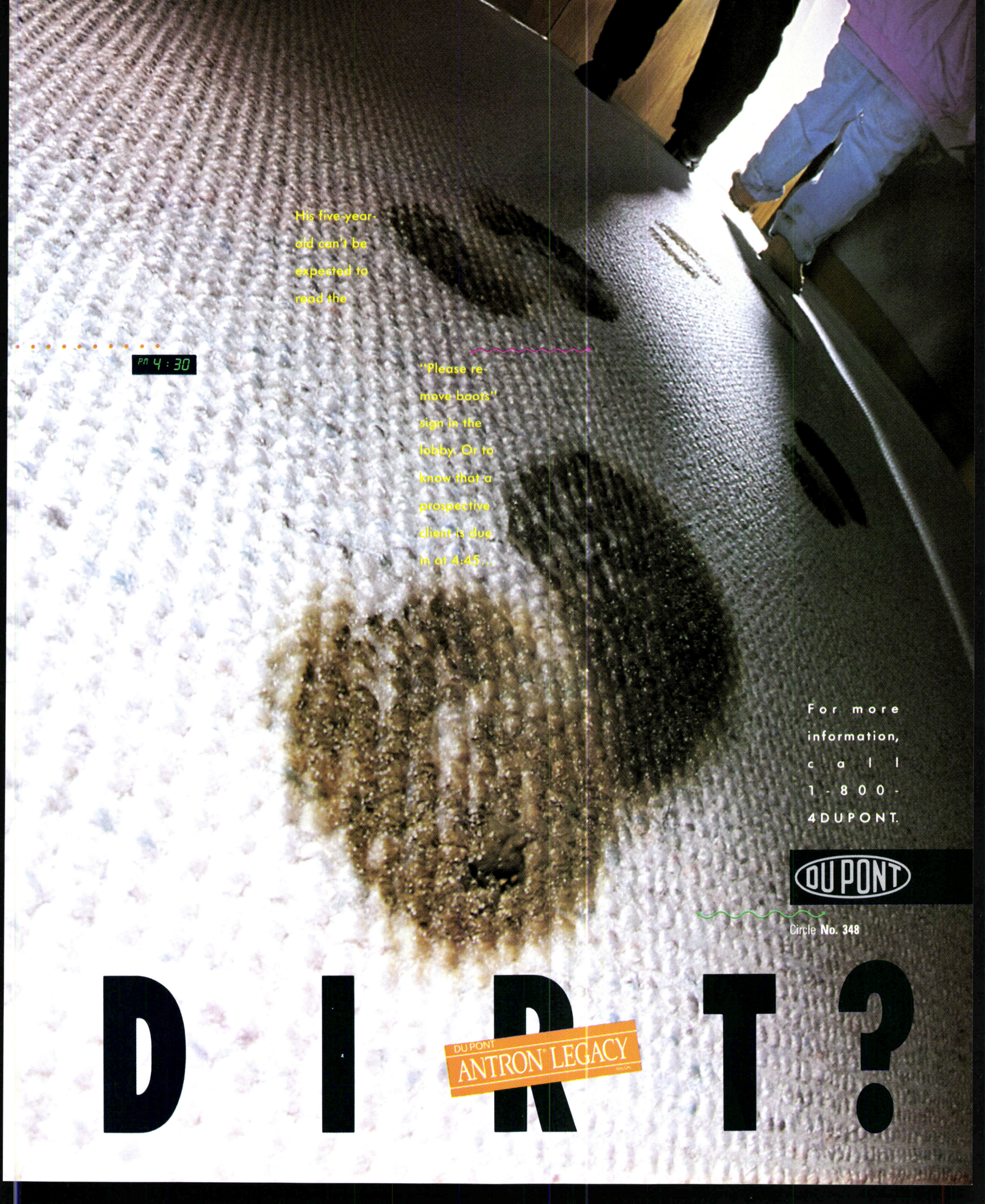
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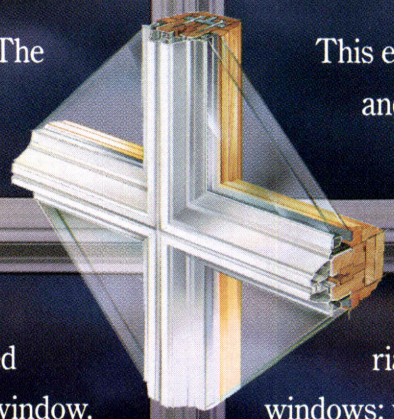
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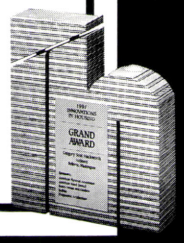
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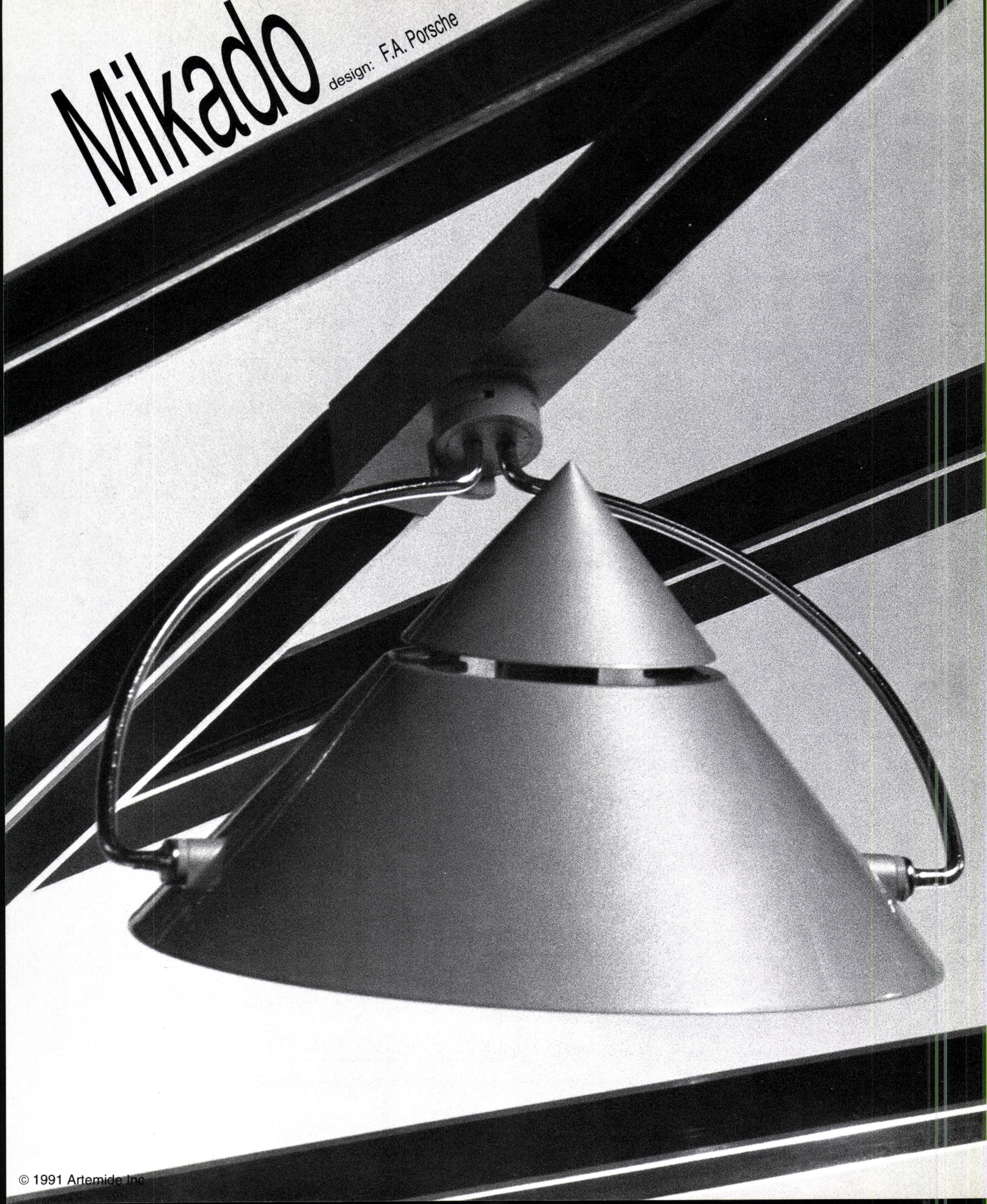
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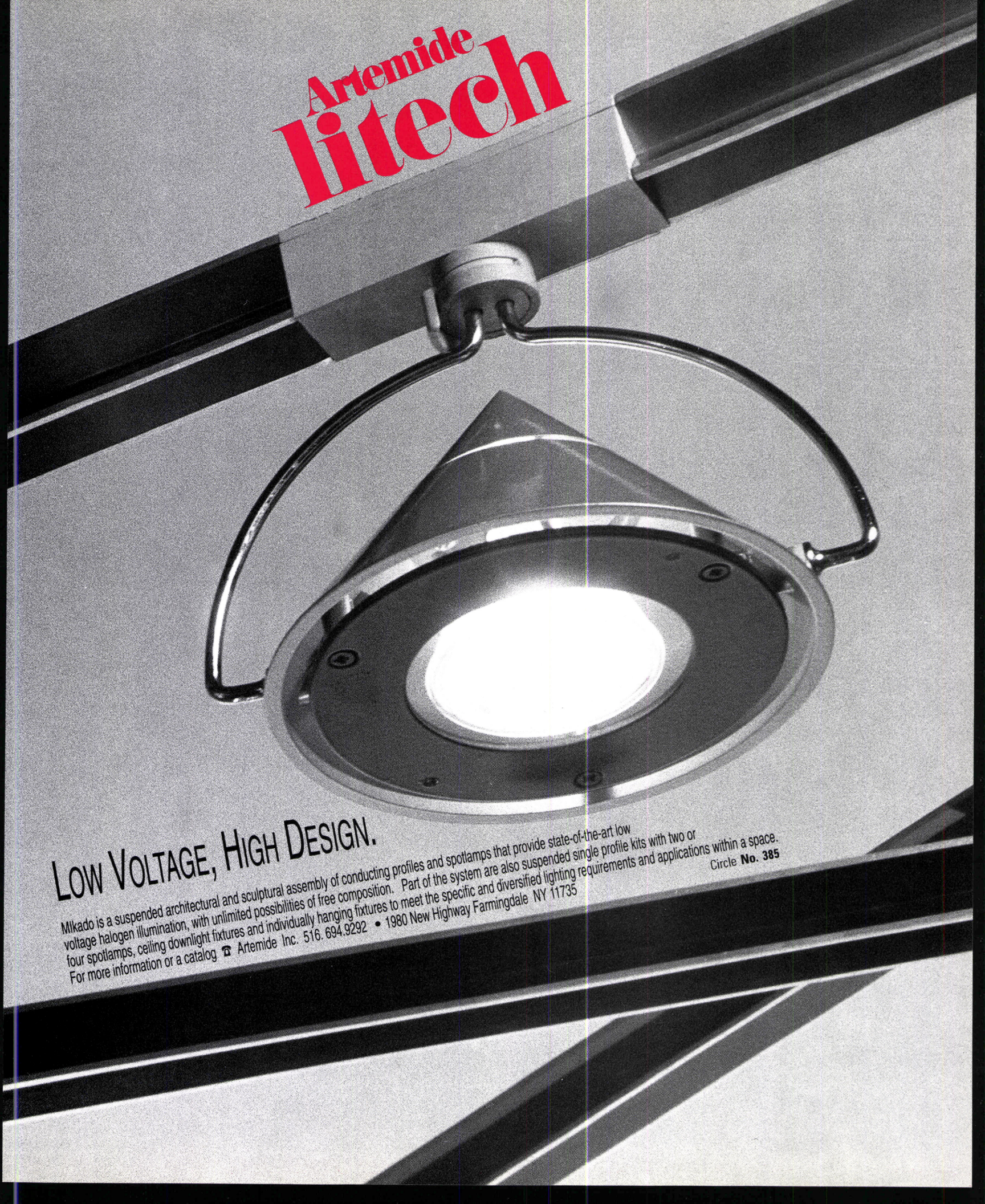
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design: F.A. Porsche



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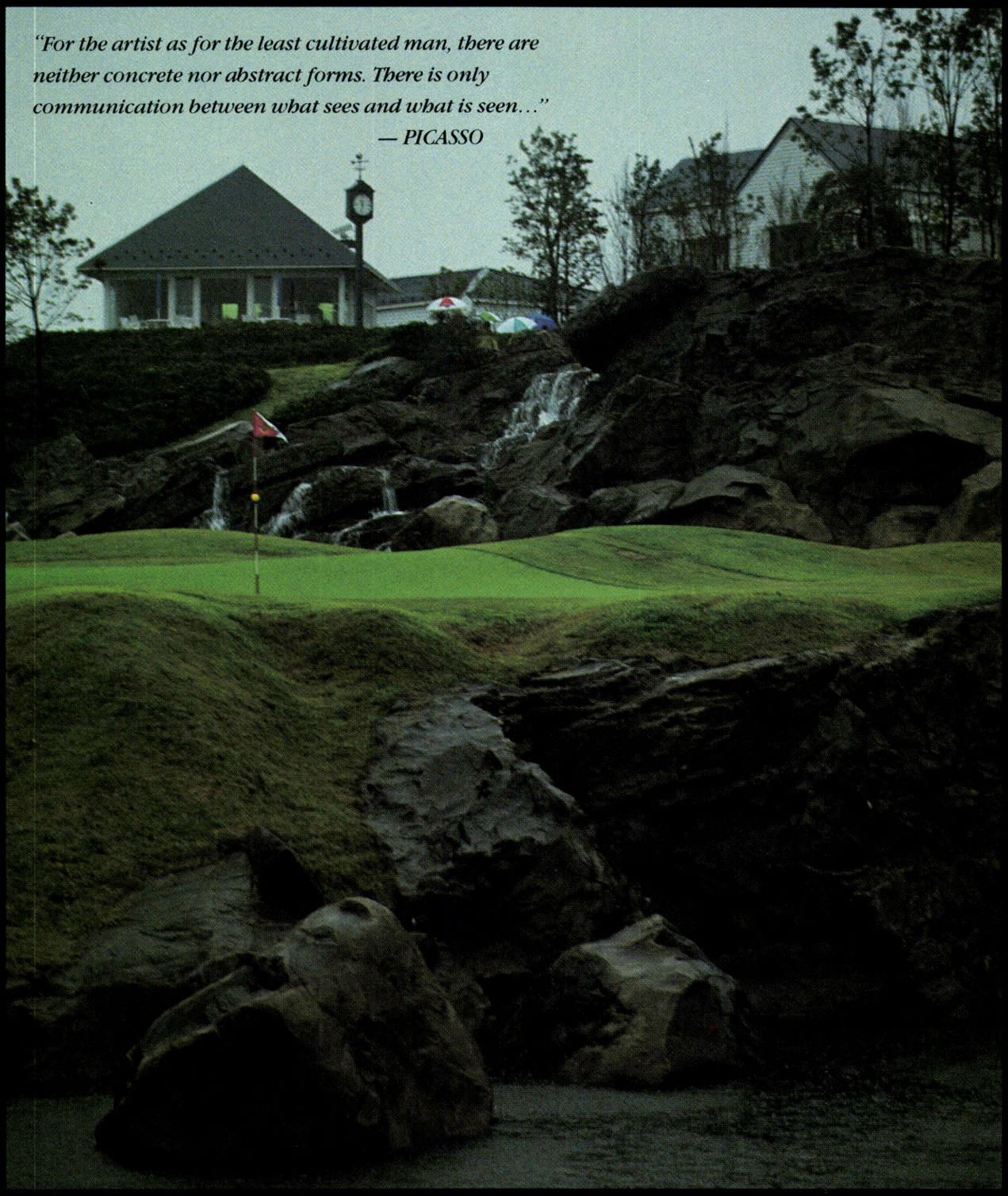


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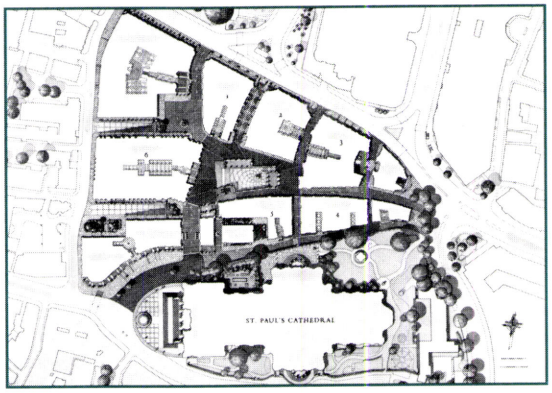
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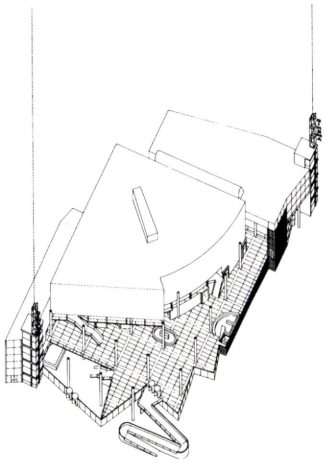
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News Report



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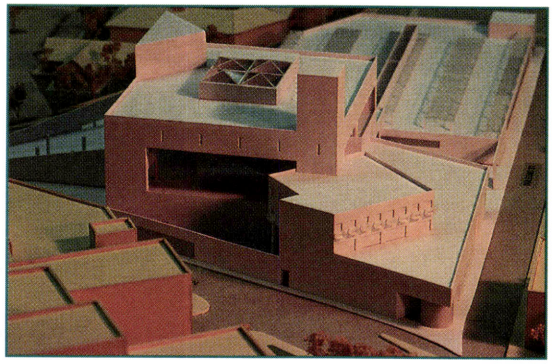
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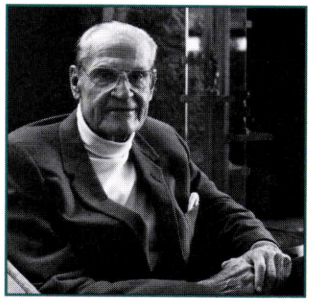
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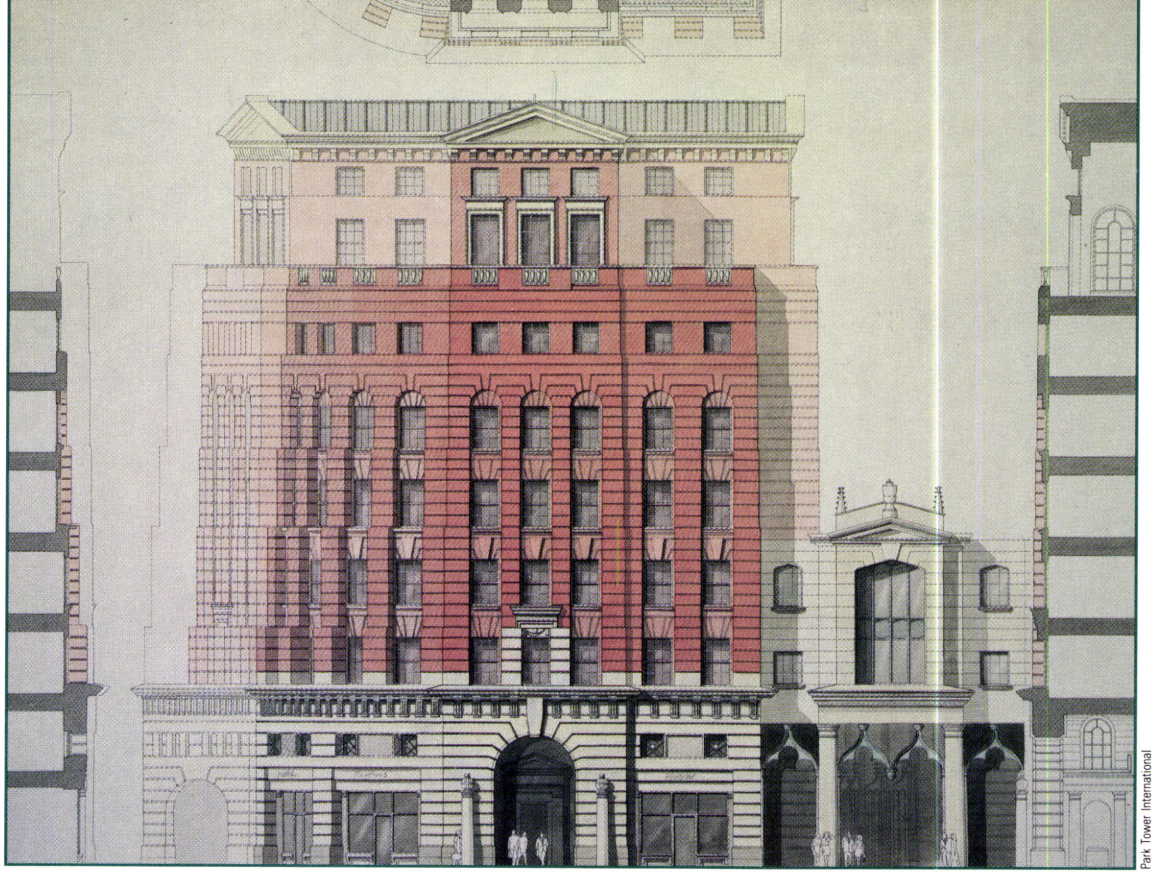
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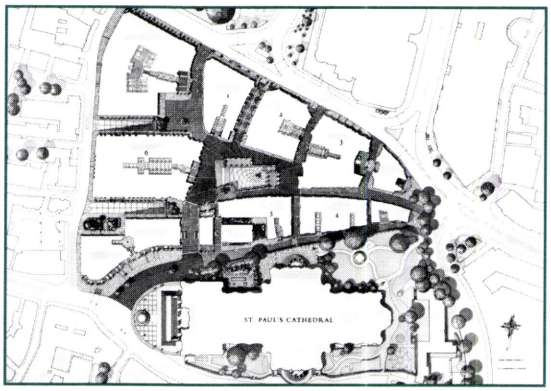
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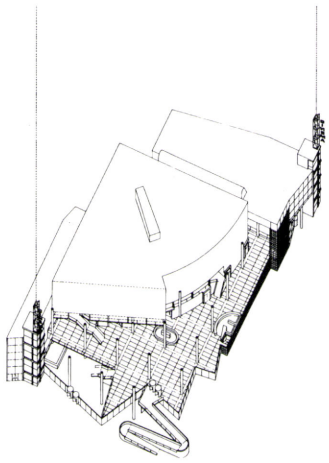
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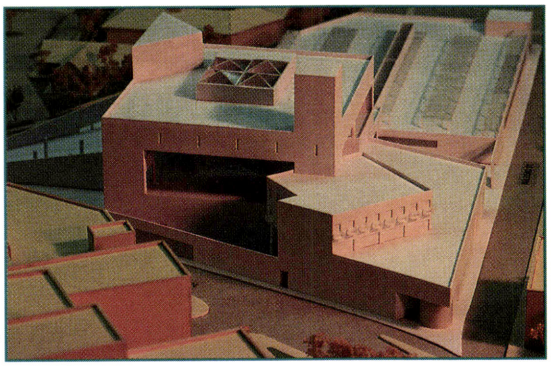
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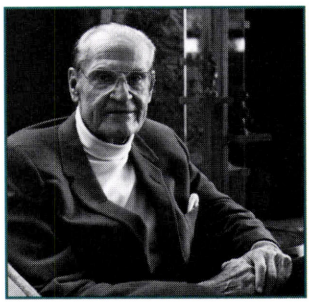
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LA Exhibitions Consider Housing, Freeways

Realism and a willingness to address real-life problems characterized two recent shows at the Los Angeles Muncipal Art Gallery in Barnsdall Park. "Corridor: The High Speed Road as a Generator of New Urban Form" (May 7–June 23) examined the relationship between the monumentality of the freeway and the human scale of streets, while the follow-up show, "RE: The American Dream" (July 16–August 18) addressed a more pressing issue: how to introduce greater density into L.A.'s residential neighborhoods.

In "Corridor," architect Barton Phelps, with co-designers Chris Jarrett and Krish Suharnoko, proposed a series of new building types to mediate the awkward meeting points of freeways and streets. Taking as their subject a 9.4-mile stretch of the Santa Monica Freeway, Phelps and his team proposed a set of five building types to mediate the changes of scale between the freeway and the city.

Proposing to build on freeway rights-of-way, the architects offered a series of building types that belly up to the freeway; according to the designers, the designs emphasize "three-dimensional concerns of solid and void, sculptural form, skyline, texture, multiple lines of view, and kinesthesia."

Near Motor Avenue, the architects propose a row of apartment blocks reflecting the scale of the residential neighborhood to the south. Those blocks are topped with 18-story apartment towers that address the freeway; the spacing of the apartment towers echoes the street grid. At Crenshaw Boulevard, buildings would cantilever partly over the freeway as a reminder of a once-busy commercial corridor interrupted by the freeway.

The proposals in "Corridor" are most successful as additions to the freeway, which currently isolates motorists from any sense of their location in the city, providing them only with signs for offramps. The proposals are sometimes less well resolved at street level, where the giant structures meet residential neighborhoods.

In the second show, six architectural teams offered new housing prototypes that challenged – with varying degrees of plausibility – both existing zoning and the institution of detached housing.

Mary-Ann Ray proposed locating houses and apartments in such under-used areas as rooftops and parking lots. Other exhibitors – including Janek Bielski; Danelle Guthrie and Tom Buresh;



Grey Crawford

From "Corridor:" a street wall for the freeway.

Roger Sherman; Ron Golan, Eric Kahn, and Russell N. Thomsen of the Central Office of Architecture, with David Leclerc – all subdivided residential blocks for greater density. Their proposals ranged from authoritarian formality to casual happenstance. Steve Johnson and James Favaro proposed low-rise apartments, each with a private court and terrace.

While the architects are realistic in recognizing an urgent need for housing strategies, they are less so in their attempts to redefine the existing patterns of socialization in semi-suburban Los Angeles. Nearly all the architects assumed sweeping changes in zoning that would raise a political squall if seriously proposed: The show begs the crucial question of how to alter existing attitudes regarding housing, particularly the sacredness of the detached house. Moreover, several of the examples provoke serious concerns about defensible space and emergency access.



Janek Bielski

Infill housing for LA by Janek Bielski.

Reservations aside, both "Corridor" and "RE: The American Dream" were stimulating examples of research and welcome instances of architects entering the arena of public-policy debate as agitators and problem solvers. **Morris Newman** ■

French Library Project Stalled

As controversy raged in the pages of leading Paris newspapers over the design of the *Bibliothèque de France* (P/A, Oct. 1989, p. 25), work on the site was halted late this summer on orders from Paris mayor Jacques Chirac.

Chirac announced that he was stopping the work in order to protect a large group of squatters who had camped on the site to protest a chronic shortage of low-income housing and government inaction on relocation. There is no doubt that Paris has severe housing problems and a sizable populace made homeless and angry by the real estate development boom over the past decade. But many observers believe the mayor simply used the squatters' presence as an excuse to begin reexamining what has proven to be a very unpopular *grand projet*.

Known colloquially as the TGB (for *Très Grande Bibliothèque*) the new library would consist of four 20-story glass towers – housing book stacks –

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Brick in Architecture Awards

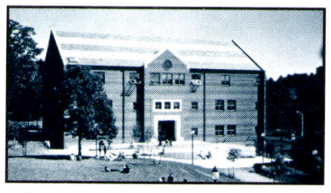
Eight projects have been cited in the biennial Brick in Architecture Awards Program sponsored by the Brick Institute of America and the AIA. Winners are:

- Northern Crop Sciences Laboratory, North Dakota State University, Fargo, by Lightowler Johnson Associates, Fargo, and Hammel Green & Abrahamson, Minneapolis;



Northern Crop Sciences Laboratory.

- Ballplayers' Refreshment Stand, Central Park, New York, by Buttrick White & Burtis, New York (P/A, Aug. 1991, p. 25);
- Arena Parking Garage, Baltimore, by Ayers/Saint/Gross, Baltimore;
- Faith Lutheran Church, Clive, Iowa, by Herbert Lewis Kruse Blunck Architecture, Des Moines, Iowa (P/A, Dec. 1990, p. 81);
- Fisher and Bendheim Halls, Princeton University, Princeton, New Jersey, by Venturi Scott Brown & Associates, Philadelphia (P/A, Aug. 1991, p. 25);
- Franklin W. Olin Humanities Building, Bard College, Annandale-on-Hudson, New York, by Simon Martin-Vegue Winkelstein Moris, San Francisco, and Wank Adams Slavin, New York;



Olin Humanities Building.

- Oregon Convention Center, Portland, by Zimmer Gunsul Frasca, Portland (P/A, Feb. 1989, p. 79);
- 350 N. LaSalle, Chicago, by Loebl Schlossman & Hackl, Chicago. ■

1991 Domino's 30

Pizza magnate Tom Monaghan has released his fourth annual list of top architects, an ever-changing roster that makes the architects eligible for commissions from Monaghan and from property owners at The Settlement, Monaghan's 110-acre planned community outside Ann Arbor, Michigan. This year's group, a more adventurous compilation than last year's (P/A, Sep. 1990, p. 27), was chosen by American Architectural Foundation president Norman Koonce, Los Angeles architect Barton Phelps, and University of Michigan architecture dean Robert Beckley.

At least one architect, Susana Torre of New York, turned down inclusion in the 30 this year, saying both that the program "appears to be nothing more than a publicity gimmick" and that listing her name "would imply complicity in [Monaghan's] agenda restricting the rights of women" (a reference to Monaghan's involvement with anti-abortion groups).

This year's 30 are:

- Bohlin Cywinski Jackson, Philadelphia;
- Centerbrook Architects and Planners, Essex, Connecticut;
- Clark & Menefee, Charleston, South Carolina;
- Cooper, Robertson & Partners, New York;
- James Cutler, Winslow, Washington;
- Andres Duany & Elizabeth Plater-Zyberk Architects, Miami;
- Esherick, Homsey, Dodge & Davis, San Francisco;
- Peter Forbes & Associates, Boston;
- Frank O. Gehry & Associates, Santa Monica, California;
- Allan Greenberg, New Haven, Connecticut;
- Graham Gund Architects, Cambridge;
- Hammond Beeby & Babka, Chicago;
- Steven Holl Architect, New York;
- Holt Hinshaw Pfau Jones, San Francisco;
- Franklin D. Israel, Beverly Hills, California;
- Hugh Newell Jacobsen, Washington, D.C.;
- Fay Jones & Maurice Jennings, Fayetteville, Arkansas;

(continued on page 28)

French Library *(continued from previous page)*

arranged around a central court. Designed by Dominique Perrault, who was selected by competition in 1989, the project is to be built in the east of Paris, roughly across the Seine from the recently completed (and widely vilified) Ministry of Finance (P/A, July 1987, p. 99).

On the heels of serious financial problems with other *grands projets,* most notably the *Opéra de la Bastille* (P/A, Dec. 1989, p. 22), the library has been the subject of stinging criticism from many quarters. In the editorial pages of *Le Figaro,* Patrice Higgonet, a professor of French history at Harvard, termed the library a "ruinous white elephant," and the result of "a cascade of grotesque decisions." He questioned whether Perrault and advocates of his design supposed that books were going to disappear, perhaps to be displaced by laser discs, since the design is so inappropriate and even hostile to principles of book conservation. (Higgonet's article was also printed in the *New York Review of Books* on August 15.) With influential support from French academic circles, he called upon city authorities to withhold approval of the design, noting that Paris never welcomed windswept plazas surrounded by tall glass towers, and hardly needed another – library or not.

Thomas Vonier ■



Hedrich-Blessing

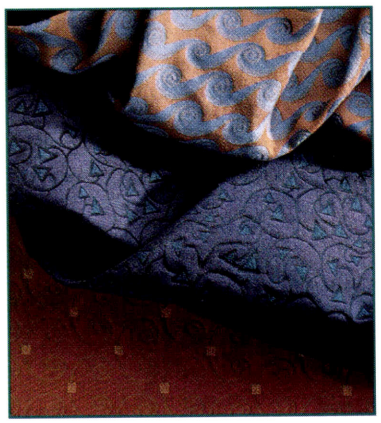
"The Office Concept" mockup presented by Herman Miller.

NEOCON 23: New Emphases Emerge

Affordability, service, and environmental correctness were the new priorities in the contract industry emphasized at the annual furnishings fair held in June at the Merchandise Mart of Chicago. "High design" and "high tech," the ends of the spectrum that commanded most visibility in previous, more prosperous years were not absent but were decidedly muted.

In the environmental arena, the range and substantiveness of manufacturers' commitments varied. Kimball, for instance, revealed through story boards installed in its showroom its long-standing program, dating back some 30 years, in which the company plants 18 trees for every one harvested on 11,500 acres of its own timberland; Herman Miller and Geiger, in different ways, are developing new veneers and finishes that incur less hazardous byproducts, and are stressing sustained forest management for their sources; Maharam/Vertical Surfaces opted for consciousness-raising with the second of their "What on Earth Are We Doing?" environmental walks, whose proceeds will benefit the Natural Resources Defense Council. And, in a commitment no less impressive, Steelcase put its formidable research resources at the disposal of the design community with an environmental resource center that occupied center stage in the company showroom: Visitors were invited to use telephones, interactive computer terminals, or plain old pen and paper to voice concerns and ask questions; Steelcase promises to respond.

Similarly in the "educational" arena, Herman Miller presented "The Office Concept," a non-prototypical office mockup installed in the showroom, in which a Herman Miller design think-tank gave form to extrapolations on various psychological, organizational, and technological issues and trends as they have emerged in copious research conducted by Herman Miller and others. Some traits clearly expressed in the mockup: the office is a highly personalized environment in which technology, completely malleable in form thanks to the microchip, may be all but invisible; the office layout itself is geared for teamwork, space sharing, and flexible work schedules.



Fabrics by Robert A.M. Stern for HBF.

Notable among the products introduced at the event were: the well-crafted "Provenance," a mid-priced desk-based collection designed by Bruce Finlayson for Charlotte, which was inspired by Shaker furniture; the biomorphic "Ios" task lamp by Stephan Copeland for Details, whose ingenious engineering adds affordability to considerable aesthetic appeal; a lustrous family of original textiles inspired by Secessionist and Classical themes, designed by architect Robert A.M. Stern for Hickory Business Furniture. In all, products of this caliber were the best reasons for optimism in an industry that sorely needs it. **Ziva Freiman** ■

(continued on page 28)



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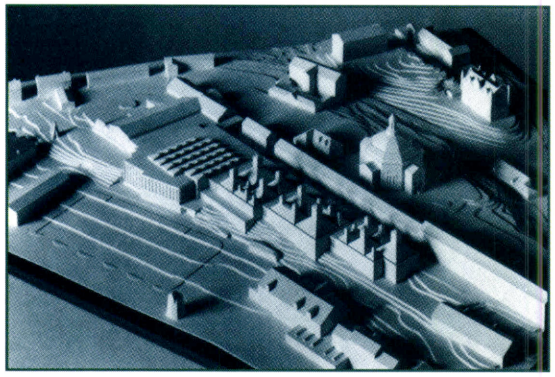
News Report *(continued from page 26)*

Three Spaniards in Stockholm

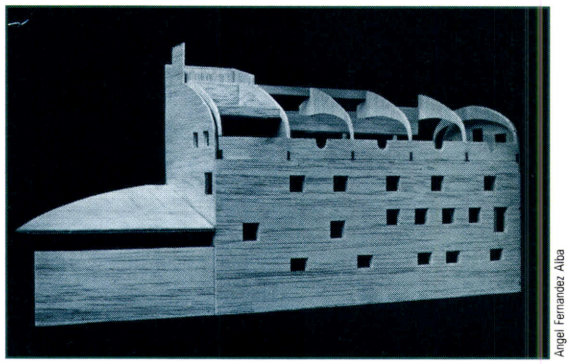
This spring, Rafael Moneo's design for the new Museum of Modern Art in Stockholm, the third major design by a Spanish architect to grace the Swedish capital so far in the 1990s, was selected in an international competition. Moneo's scheme, which was selected from among 208 entries, of which 200 were submitted by Swedish architects, will unite the existing museums of Architecture, Modern Art, and Far Eastern Antiquities at the crest of Skeppsholmen, Stockholm's most scenic island.

Two other Spanish architects, Angel Fernandez Alba of Madrid and Ricardo Bofill of Barcelona, also have major projects in Stockholm that will be completed by this fall. Alba's new Spanish Embassy, located across the Saltsjon River from Moneo's museum site, combines an interest in modern Nordic design with Mediterranean cadence and detail. Located in Djurgarden, a beautiful wooded park belonging to the royal family, the site abuts a noteworthy example of Nordic Palladian Classicism: a colonnaded villa (1844) by famed Swedish sculptor Johan Niklas Bystrom, which was ceded to Alfonso XIII of Spain in 1928.

Bofill's South Station housing block, known locally as "The Arch" for its massive crescent-shaped plan, has generated controversy typical of

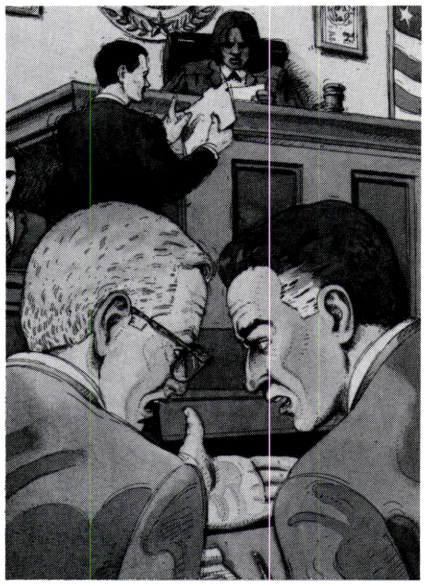


Moneo's Museum of Modern Art (center).



Angel Fernandez Alba

Spanish Embassy by Angel Fernandez Alba.



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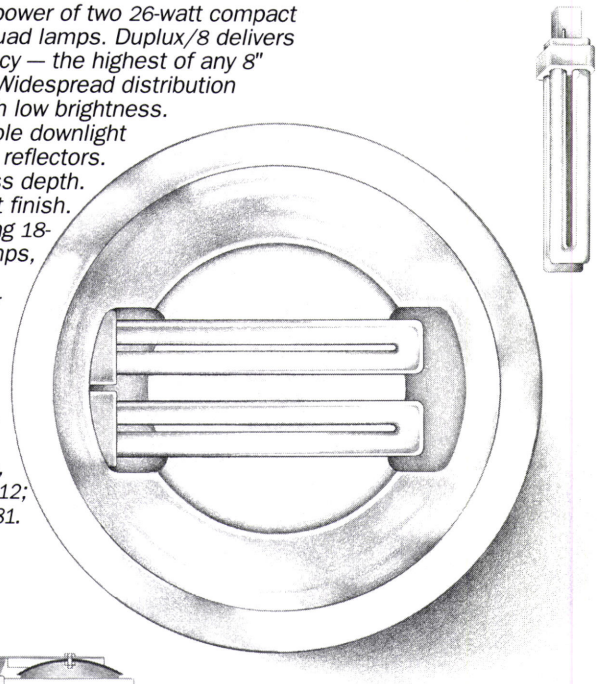
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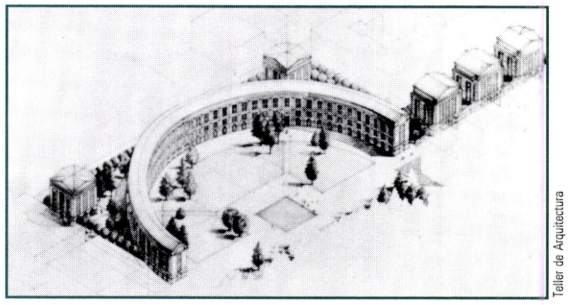
Stockholm *(continued from page 28)*

his housing projects, including a televised debate. The focus of an urban renewal project in the heart of the bohemian Södermalm district, its heavy precast façade and mighty form have been criticized as "breaking totally with the well-defined character of the area" by Commission for Urban Aesthetics president Wilhem Forsberg.

While Bofill certainly hoped that the finished quality of the Neoclassical modulations would be unlike any previously seen in Sweden, Ingela Lind of the Department of Housing affirms that numerous changes have been made to adjust the design to Scandinavia. The exterior relief is less plastic now, to maximize passive solar gain, and interior changes have been effected to meet strict local housing standards. In short, says Lind, "the Bofill of Stockholm is not the same as that of Paris."

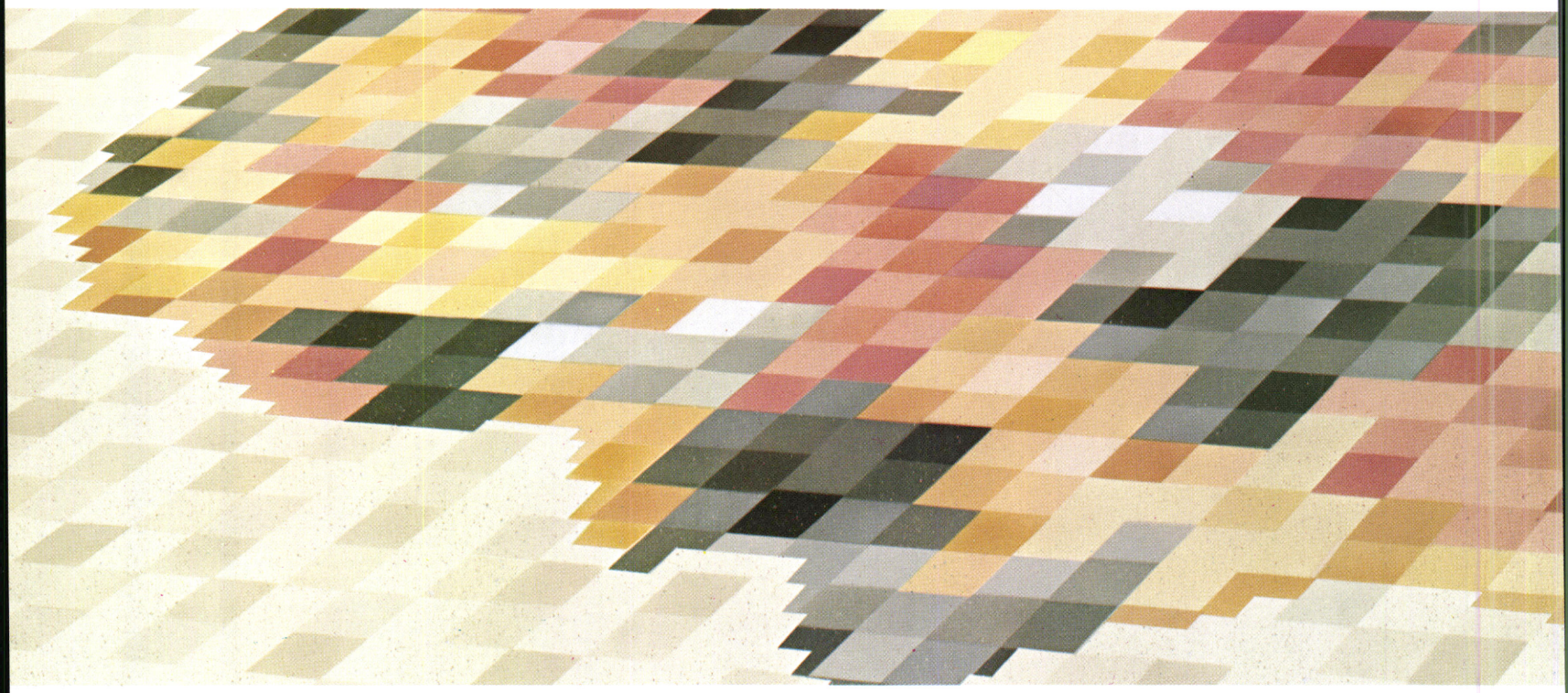
C.C. Sullivan ■

The author is a freelance writer who recently moved to New York from Madrid.



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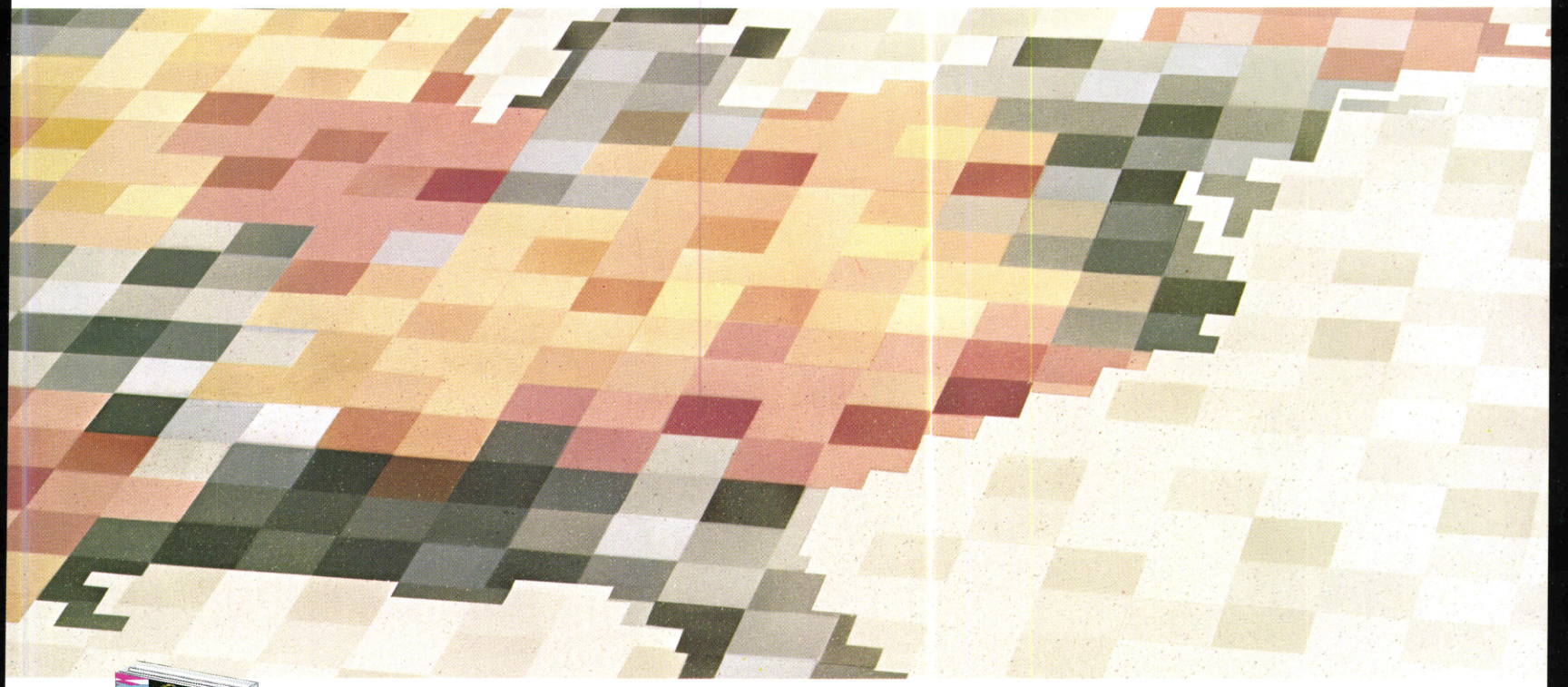
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CDCs After 25 Years

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CDCs continue to stoke the activist spirit of their directors' student years: One director belittled zoning as a charade that keeps lower-income households at bay; a Mexican participant reminded us that the United States' consumption of 45 percent of the world's energy is untenable. But many of the directors, who are now in their forties, bluntly state that architecture itself cannot solve the social and economic disarray around them. Nevertheless, the conferees seem undaunted by the scale of problems they encounter, and speak proudly of their commitments and with great respect for their clients. **Philip Arcidi** ■





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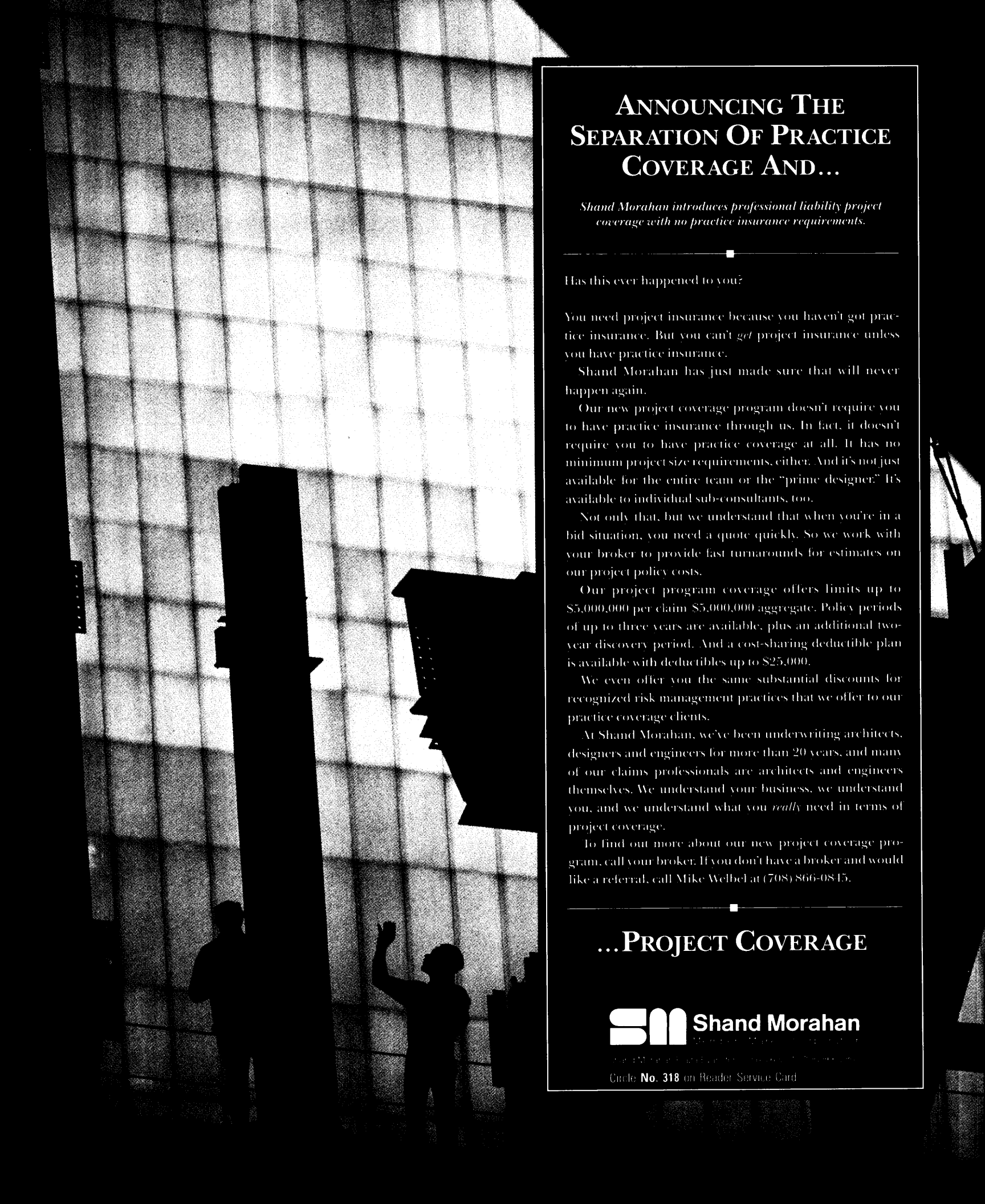


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Exhibitions

Jordan Moser
Through September 30

Chicago. "Jordan Moser: Chicago Architecture and Furniture" takes a look at this young Chicagoan's eclectic style. Athenaeum.

Steven Holl and Martha Schwartz
Through October 13

Seattle. This pairing of architectural *Wunderkinder* includes Holl's "Edge of a City," an exhibition originated at the Walker Art Center, and 16 projects by Schwartz. Henry Art Gallery.

Age of the Metropolis
Through November 10

Montreal. "The 1920s: Age of the Metropolis" is a monumental undertaking initiated in an effort to illustrate the decade's whirlwind plunge into Modernism (P/A, Aug. 1991, p. 25). The curators focused their research on Berlin, Paris, and New York and have included works by the day's most prolific and influential artists, architects, designers, and photographers. Museum of Fine Arts.

Architecture of the Venice Biennale
September 8–October 6

Venice, Italy. The "Fifth International Exhibition of Architecture of the Venice Biennale" will include: competition entries for "A Gateway to Venice" and a Film Palace (see p. 142) and recent work by Eisenman and Gehry as well as executed designs by Rossi, Scolari, and Stirling and Wilford. Biennale Gardens and Venice Arsenal.

Tadao Ando
October 3–December 31

New York. Billed as Ando's first museum retrospective in the United States, this exhibition will chronicle the self-taught architect's sublime Modernist aesthetic. Museum of Modern Art.

Louis Kahn
October 20–January 5, 1992

Philadelphia. "Louis I. Kahn: In the Realm of Architecture" is a major traveling exhibition making its debut in the city most associated with Kahn. The exhibition installation was designed by Arata Isozaki based on Kahn's unbuilt plan for the Mikveh Israel Synagogue. Organized by the Museum of Contemporary Art in Los Angeles, the show will travel. Museum of Art.

Competitions

Finish First Competition
Entry deadline September 30

Livonia, Michigan. Wolverine Technologies has announced its third annual Finish First exterior design competition. Completed projects using the company's vinyl products may be submitted in the following categories: new residential construction, residential remodeling, historic renovation, light commercial construction, and "most innovative use." Contact Wolverine Technologies, Finish First, 17199 Laurel Park Drive N., Livonia, MI 48152 (800) 521-9020.

Metal Construction Awards
Application deadline October 1

Washington, D.C. The 1991 MCA Merit Awards Program, sponsored by the Metal Construction Association, recognizes "unique and creative uses of metal" in projects completed after December 31, 1989. Contact MCA Merit Awards Program, MCA Headquarters, 1101 14th St., N.W., Suite 1100, Washington, D.C. 20005 (202) 371-1243.

Fulbright Grants
Application deadline October 31

New York. Applicantions for Fulbright grants for graduate study in the visual arts (for the 1992-1993 academic year) are now being accepted. Applicants must be U.S. citizens and have a bachelor's degree or the equivalent by the beginning date of the grant. Architecture, design, film/video, graphic arts, painting, photography, and sculpture are the possible areas of study. Please consult the "Fulbright and other grants for graduate study abroad, 1992-1993" brochure. Contact U.S. Student

(Continued on page 37)

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Calendar *(continued from page 35)*

Programs Division, Institute of International Education, 809 United Nations Plaza, New York, NY 10017-3580 (212) 883-8200.

Conferences

SARA Convention
October 9–13

Minneapolis. The Society of American Registered Architects will hold its 35th annual convention at the Marquette Hotel in Minneapolis. This year's theme is "The Urban Environment, Urban Life, Urban Architecture." Contact SARA National Headquarters, 1245 S. Highland Ave., Lombard, IL 60148 (708) 932-4622.

Urban Waterfronts
October 10–12

Washington, D.C. "Make No Little Plans" is the theme of the ninth annual Conference on Urban Waterfront Planning, Development, and Culture. "The Allure of the Waterfront – Making Cities Livable" and "Respecting Mother Nature" are among the topics to be discussed. Contact The Waterfront Center, Susan Kirk or Ginny Murphy, 1536 44th St., N.W., Washington, D.C. 20007 (202) 337-0356 or FAX (202) 625-1654.

Access Expo
October 16–18

Washington, D.C. Organized in response to the Americans With Disabilities Act of 1990, Access Expo is being billed as the first exposition of accessibility products and services. Conference sessions on regulatory issues, compliance procedures, emerging trends, and access technology developments will be held. Access Expo will be at the Washington, D.C. Convention Center. Contact Kristin Lindberg, Show Director, Expocon Management Associates, 7 Cambridge Dr., P.O. Box 1019, Trumbull, CT 06611 (203) 374-1411 ext. 105 or FAX (203) 374-9667.

Metalcon International
October 16–18

Washington, D.C. Manufacturers of metal building systems, components, machinery, accessories, and supplies will be exhibiting at Metalcon International, a conference sponsored by the Metal Construction Association. Contact Claire Kilcoyne, Practice Managment Associates, 10 Midland Ave., Newton, MA 02158 (617) 965-0055/(800) 526-5455 or FAX (617) 965-5152.

National Preservation Conference
October 16–20

San Francisco. "Historic Preservation: The Next 25 Years" is the forward-looking theme of the 45th National Preservation Conference. Advocacy, environmental, cultural, landscape, preservation, and many other issues will be discussed in an extensive series of educational sessions. Contact National Preservation Conference Registration, National Trust for Historic Preservation, 1785 Massachusetts Ave., N.W. 20036 (800) 937-6847 or FAX (202) 673-4223.

Designer's Saturday
October 17–19

New York. The 24th annual market will be a coordinated effort between the IDCNY and DAC and A&D buildings in order to make the show a more cohesive event. Programs and exhibitions at the IDCNY will focus on the environment and programs at the A&D building will focus on the economy (see preview, p. 157). Contact Hank de Cillia or Leslie Holloway (212) 826-3155, for information on Designer's Saturday events.

Kahn and Philadelphia
October 18–20

Philadelphia. "Louis I. Kahn and the Philadelphia School: The Genesis of American Contemporary Architecture," sponsored by the AIA Committee on Design and the ACSA, "will reinvestigate the power" of Kahn in connection with a Kahn show (see Exhibitions, above). Talks by Robert Venturi, Denise Scott Brown, Robert Geddes, Romaldo Giurgola, G. Holmes Perkins, Tim Vreeland, A.J. Diamond, Charles Dagit, and Balkrishna Doshi and tours of Kahn-designed buildings will be given. Contact AIA Committee on Design (202) 626-7361; Karen Eldridge, ACSA (202) 785-2324; or AIA/ Philadelphia Chapter (215) 569-3186. ■



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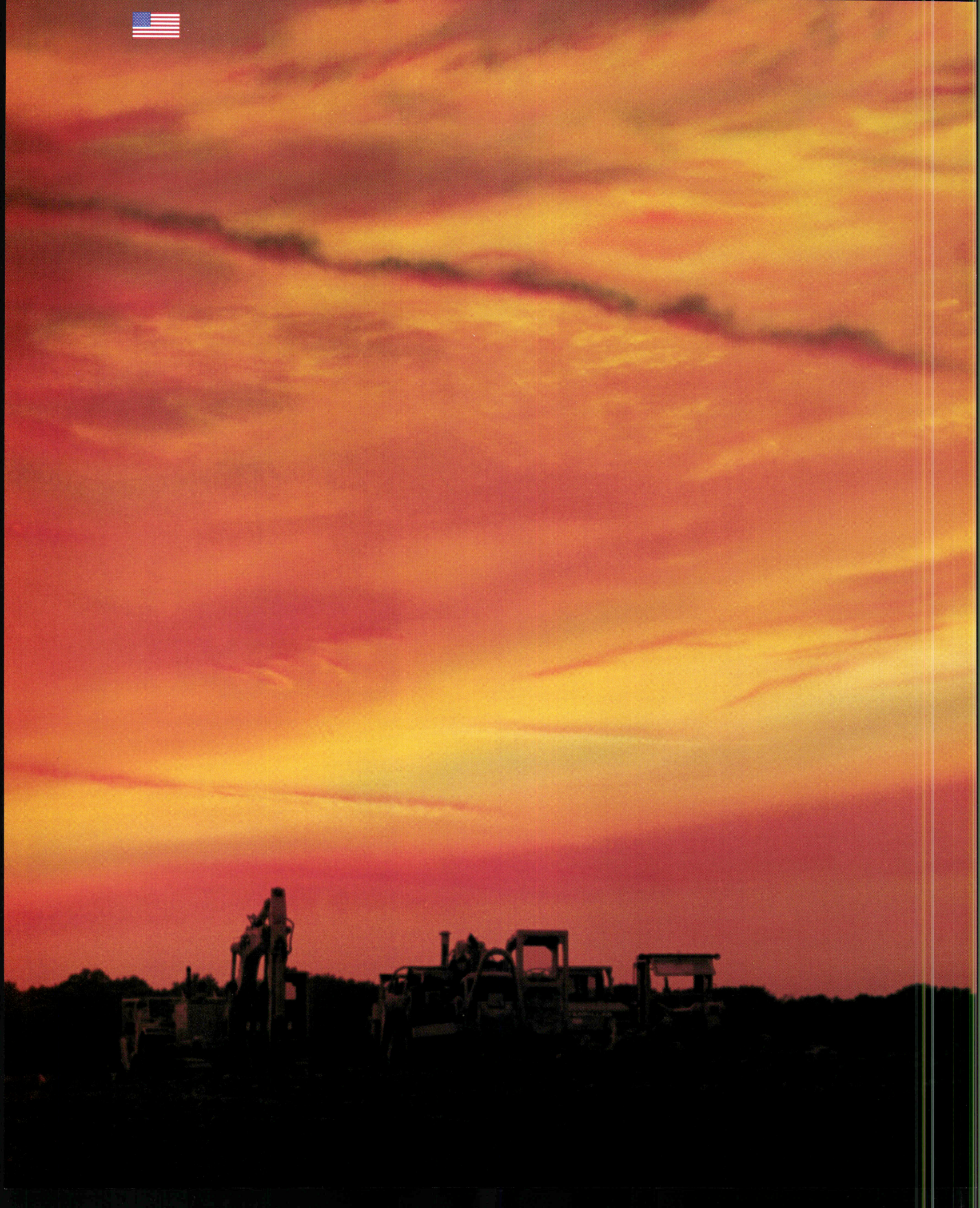
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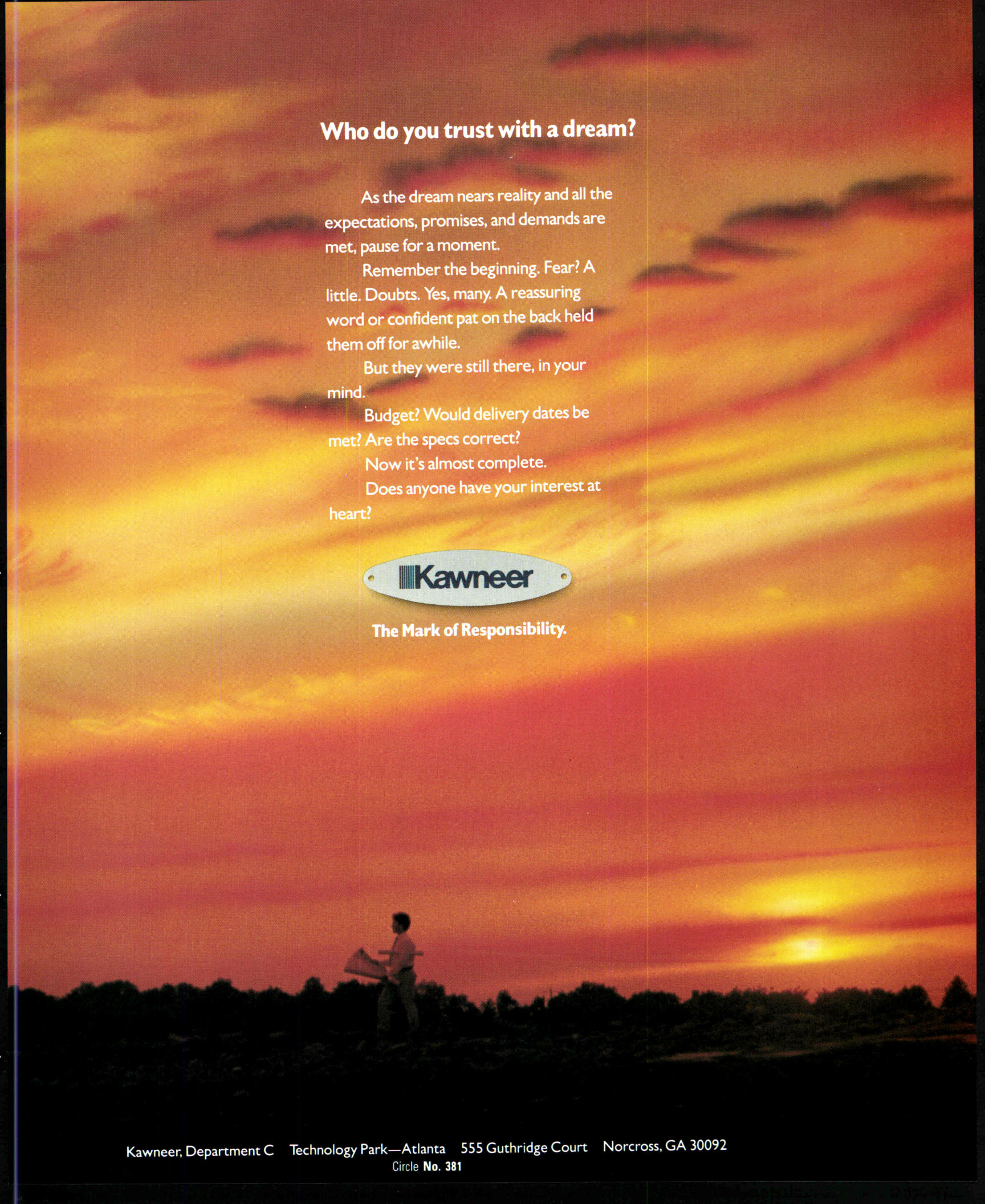
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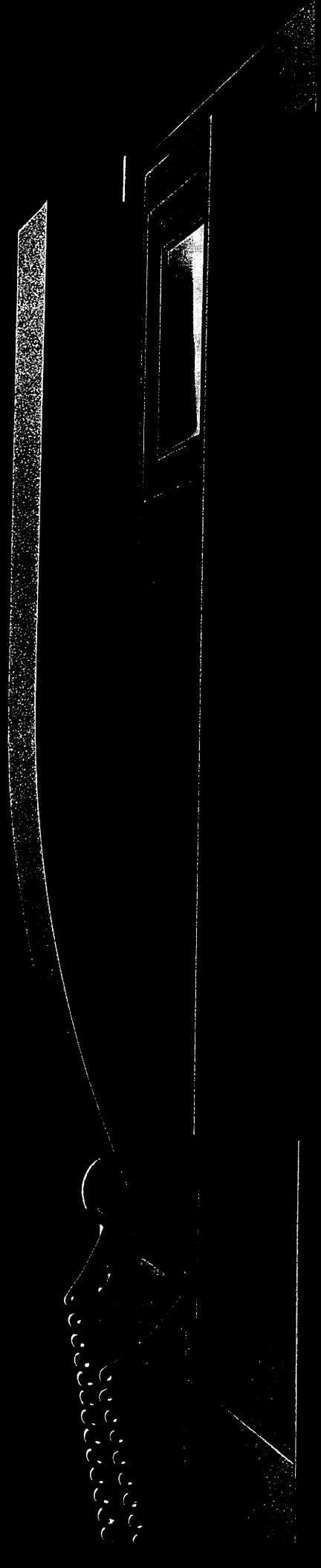
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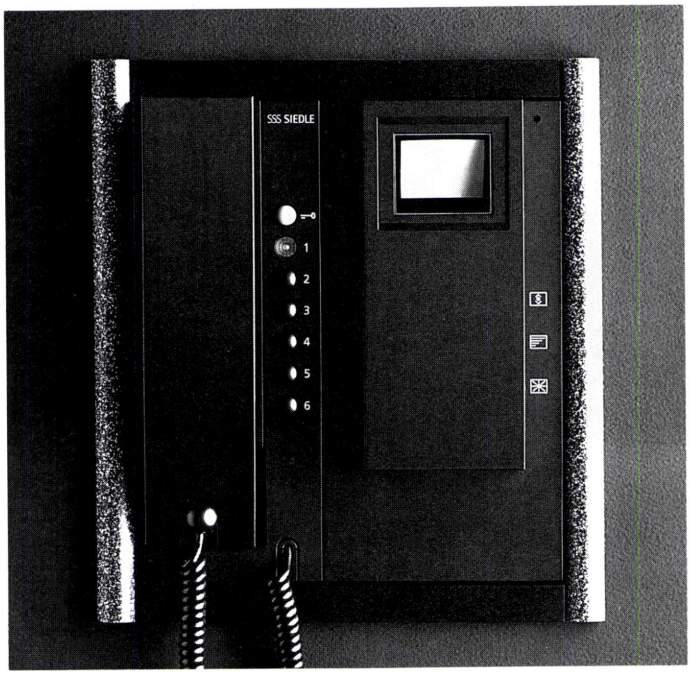

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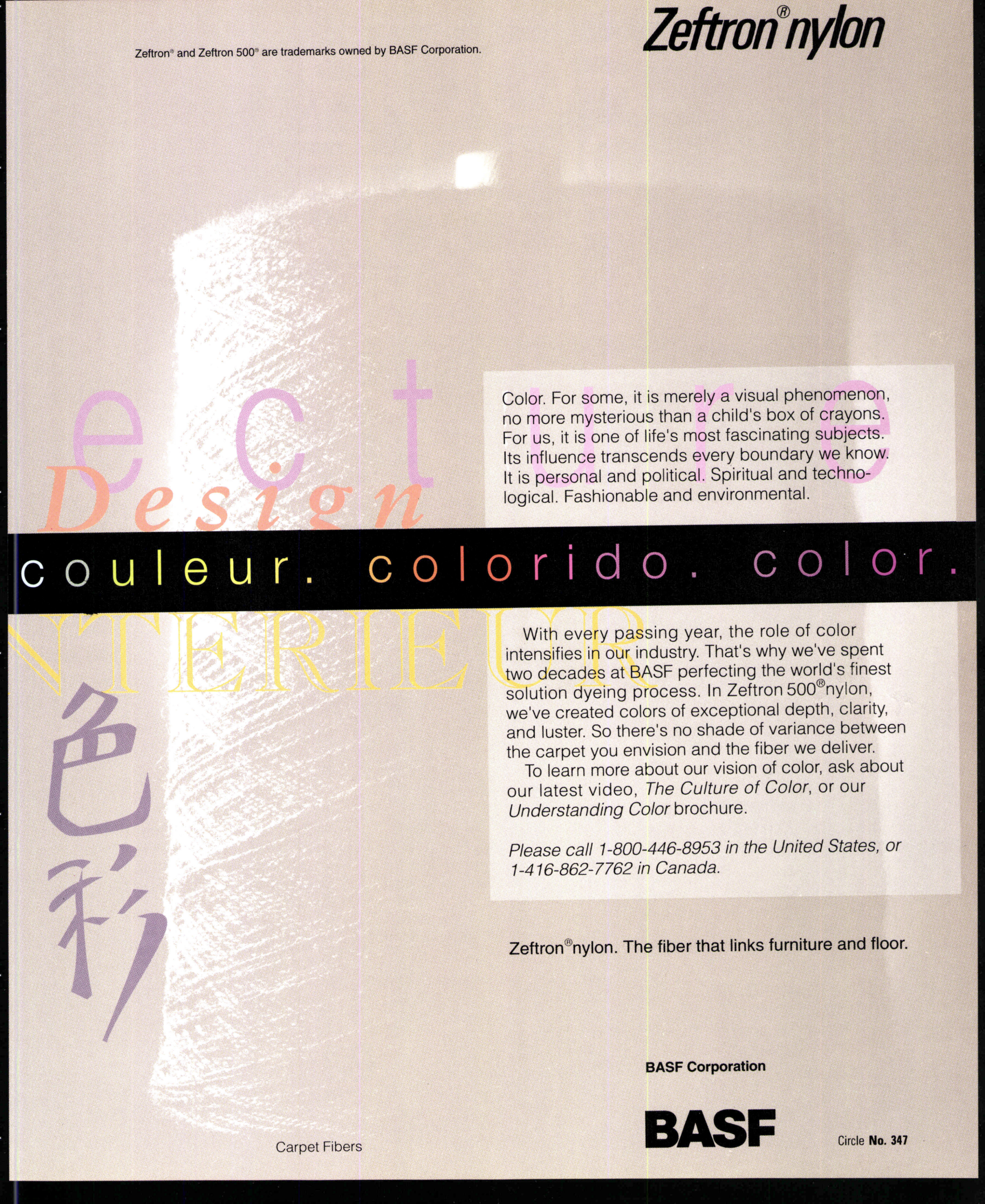
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color. colour. kleur.
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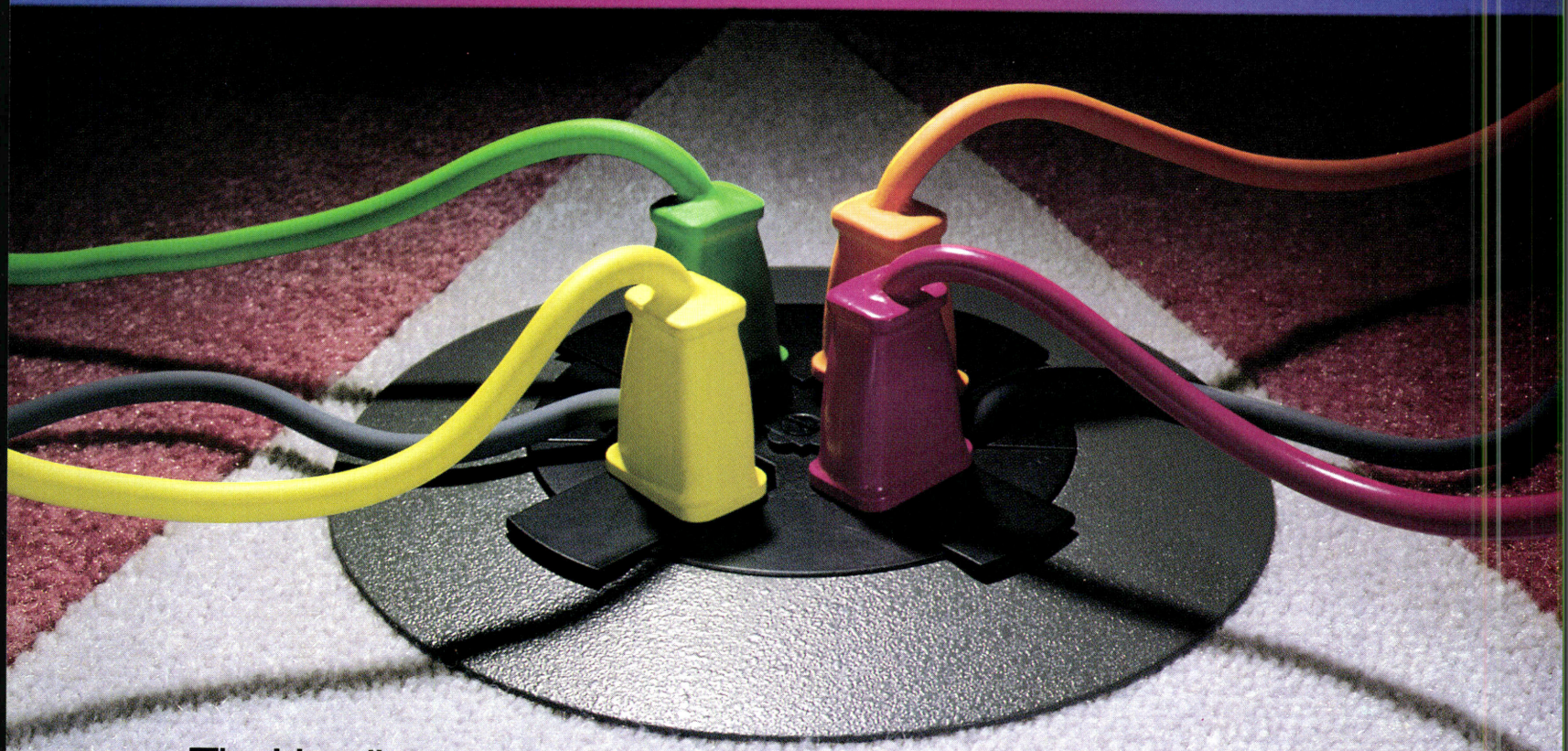
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Technics
Air and Vapor Barriers

Researcher **Richard L. Quirouette** sets forth definitions, distinctions, and detailing implications of the differences between air and vapor barriers.

Technics

Feature: Air and Vapor Barriers 45

Diagnostic Clinic: Corrosion in Cavity Walls 53

Technics-Related Products 172

The term "air barriers" means housewraps to most architects in the U.S., but in Canada, air barriers are systems around which an entire design and troubleshooting industry is growing. Under sponsorship of the National Research Council Canada and the Canada Mortgage and Housing Corporation (both federal agencies), Canadian researchers are developing standards, details, and recommended practices largely unknown in the U.S. While our mostly temperate climate is more forgiving than that of our neighbors to the north, there is much to learn from the Canadian building science approach to wall and roof design. We asked one of Canada's leading building envelope researchers and consultants to report on current thinking and what it means in practice.

Kenneth Labs



1



2

1 *Density of efflorescence on brick veneer increases from lower story (not much) to upper story (heavy) as a result of increasing moist air infiltration near the top of the wall, with little exfiltration (or even infiltration) at the bottom.*

2 *Icicles forming at joints of precast concrete cladding are caused by moist air leaking out through failed joint seals, condensing, and freezing at the exterior. Note the small icicle originating at an imperfection in the middle of the concrete panel.*

Continuing examinations of buildings in Canada have convinced many researchers and failures investigators that air leakage is the leading cause of exterior wall problems. It has been linked to efflorescence, spalling masonry, ice build-up under soffits, frozen pipes and condensation in cavities, rain penetration, high energy costs, and poor control over indoor humidity (1, 2). Many of these problems originate early in the working drawing and specification phases, not with the materials used or the methods of construction. The principal cause appears to be confusion about the function of air and vapor barriers.

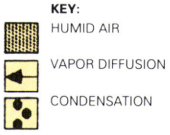
Architects commonly specify vapor barriers. Sometimes an "air/vapor barrier" will be specified, and on rare occasions, the term "air barrier" may be used. This lack of consistency in the use of terms reveals confusion in the industry about the design, materials, and methods of construction of these fundamental components of the building envelope. However, the basic confusion is with the functions of these different barriers.

A 4 mil polyethylene sheet makes a good vapor barrier and 12″ of cast-in-place concrete makes a good air barrier. This would be too restrictive as a working characterization, but the functions of these two barriers are as different as polyethylene and concrete. In practice, many materials can be used as vapor barriers and many may be effective air barriers. The choice of materials, their combination, and the method of assembly depend on the function. A clear understanding of the functions of the two types of barriers is imperative to good design and to effective and predictable building envelope performance.

Vapor Diffusion Control (Vapor Barriers)

The principal function of a vapor barrier is to stop or, more accurately, to retard the passage of water vapor as it diffuses (some Canadian agencies and authors now use the term "vapor diffusion retarder," or VDR) through the wall assembly (3). The rate at which water vapor diffuses depends on two factors, the difference between the water vapor pressure (absolute humidity) in the air inside the building and that in the outside air, and the resistance that materials present to the migration of moisture by diffusion.

All materials resist moisture diffusion. Water vapor migrates through air, polyethylene film, fiberboard, concrete, and many other materials, but at varying rates. A vapor barrier is a material that offers a higher resistance to the diffusion of vapor than most other materials. It is usually placed on the warm side of the insulation (4). Polyethylene film of sufficient thickness is the material most commonly used for this purpose; however, other materials such as aluminum foil, some paint products and insulation adhesives (mastics), metal, glass, and even concrete of suffi-

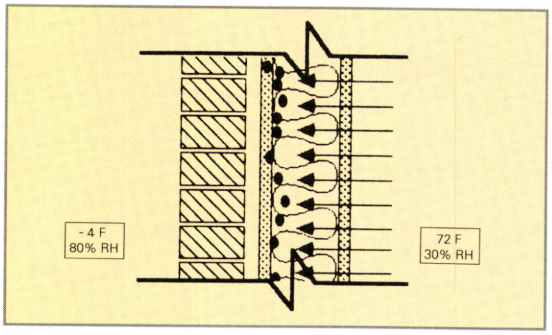


3 Water vapor is forced through wall assemblies by differences in water vapor pressure – or absolute humidity (the amount of water contained in a unit volume of air) – between one side of the wall and the other. Even if the indoor relative humidity (RH) is 30 percent while that outdoors is 80 percent, indoor air at 72 F contains more moisture per cubic meter or foot than outdoor air at −10 F. The greater density of water vapor in the indoor air drives moisture toward the outdoors through the wall in an attempt to relieve the greater indoor water vapor pressure.

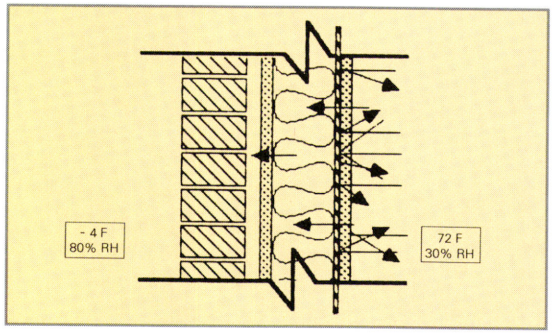
4 Vapor barriers (or retarders) impede the diffusion of moisture from higher to lower areas of absolute humidity. In Canada and the northern U.S., wall assemblies are designed for the winter condition of moisture moving outward. The vapor barrier is placed on the warm side of the wall, where it retains the vapor before it reaches a region within the wall cold enough for the vapor to condense into liquid. Design practice is more complicated in the southeastern U.S., where these conditions exist in the winter, but where the direction of moisture migration may reverse during the course of the year. In summer, the absolute humidity of air-conditioned (dehumidified) indoor air is often lower than that of the outdoor air. Under these conditions, vapor is driven from the outside in, where it may be blocked by and condense on the back of, for example, vinyl wall coverings – a problem that plagues the hotel and motel industry in the Southeast [P/A, October 1990, pp. 47–49].

5 Canadian field investigations have shown that moisture problems in walls are more often caused by the lack of airtightness than by inadequate vapor diffu-

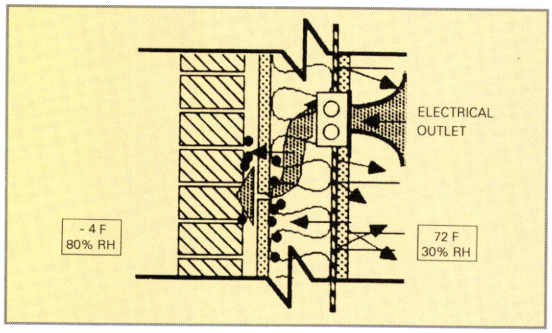
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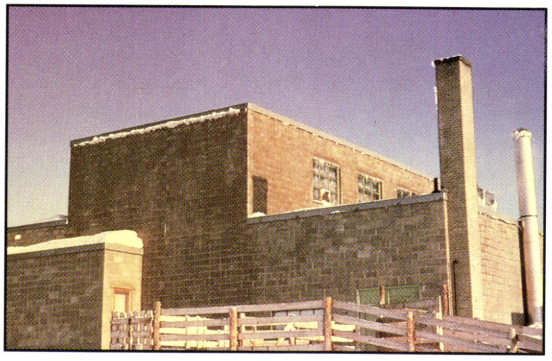
3 WALL WITHOUT A VAPOR BARRIER



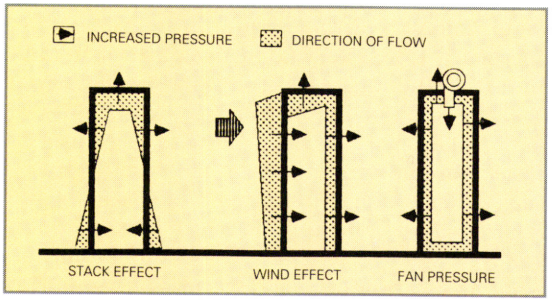
4 WALL WITH A VAPOR BARRIER



5 VAPOR BARRIER PREVENTS DIFFUSION, BUT NOT AIR LEAKAGE



6 ICING UNDER COPING CAUSED BY EXFILTRATING WARM, MOIST AIR



7 AIR PRESSURE DIFFERENCES ACROSS THE BUILDING ENVELOPE

cient thickness may also function as vapor barriers.

The moisture diffusion control property of a material is its "water vapor permeance." This is usually expressed as the weight of moisture that will diffuse through a given area and thickness of material over a specified period of time at a unit vapor pressure difference. For example, a sheet material, 0.1 mm thick, having a water vapor permeance of 10 will allow 10 nanograms (ng) of moisture to pass through one square meter (m^2) of the material per second (s) when the difference in water vapor pressure is one pascal (Pa). In Canada, a rate of 15 ng/Pa(s)m^2 is the maximum accepted water vapor permeance (CAN 2–51.33-M80) for a Type I vapor barrier. Any material having a rating of 15 or less may be suitable as a Type I vapor barrier, provided it meets the other conditions of the standard.

For example, assume that a wall section (5) is a single stud space exposing to the room side one square meter of the vapor barrier. The barrier has a water vapor permeance of 5 ng/Pa(s)m^2 (in English system units, 0.087 grains/h(ft^2)in Hg), the room conditions are 21 C (70 F) and 30 percent relative humidity, and the sheathing is at −20 C (−4 F). If these conditions prevailed for one month, approximately six grams of moisture would diffuse into the cavity – enough to create only a thin layer of frost on the inside surface of the sheathing. This does not mean that diffusion control is unimportant and that the vapor barrier can be omitted. A vapor barrier is important, particularly in high humidity buildings like computer centers, museums, hospitals, and public swimming pools.

For the vapor barrier to control condensation resulting from vapor diffusion, it must be placed on or near the warm side of the insulation, which is normally the high vapor pressure side. Contrary to popular belief, a vapor barrier need not be perfectly continuous. Unsealed laps, pin holes, and minor cuts, for example do not appreciably increase the overall moisture diffusion rate into a wall or roof cavity. It is worthwhile, however, to avoid these imperfections if possible.

Air Leakage Control (Air Barriers)

Water vapor diffusion is only one of the mechanisms by which water can be transported into a wall or roof cavity, so vapor barriers satisfy only part of the requirement of controlling moisture movement. The other mechanism, which is now considered to be far more significant, is air leakage. Air leakage occurs when cracks, holes, and other openings in the building envelope form a continuous path from inside to outside and an air-pressure difference occurs across it. Both mechanisms – vapor diffusion and air leakage – may of course, operate at the same time.

The principal function of the air barrier is to stop outside air from entering the building through the walls, windows, or roof, and inside air from exfiltrating through the building envelope to the outside. This applies whether the air is humid

or dry, since air leakage can result in problems other than the deposition of moisture in cavities. Exfiltrating air carries away heating and cooling energy, while incoming air may bring in pollution as well as disable a rain screen wall system (see P/A, August 1990, pp. 47–52).

Moisture-laden air passing through an insulated cavity with a vapor barrier may deposit much more moisture than would diffuse through the vapor barrier in the same period of time. For example, if the room-side surface in the previous example were opened to the cavity, perhaps through an electrical outlet or a service pipe penetrating to the inside, with a net opening area of 625 mm^2 (1 in^2), 2600 m^3 (91,818 ft^3) of air would enter or exit the cavity to the outside under a 10 pascal (0.2 psf) pressure difference (equivalent to a 15 km/h (9.3 mph) wind) over one month. This would amount to approximately 3000 kg (6614 lbs) of air and 14 kg (30.9 lbs) of water. Assuming further that only 10 percent of this water condenses out in the cavity, then air leakage has deposited 233 times the amount of moisture that passed by diffusion only.

Air Leakage Mechanisms

Holes or openings through the envelope can take many forms, including cracks or joints between infill components and structural elements, or poor connections between the wall and the roof and at openings for building services. They may occur even in porous materials like concrete block, high-density glass fiber, open-cell polystyrene insulation, and fiberboard. Some openings follow direct channels from inside to outside, as in an uncapped steel deck at the perimeter of a floor or ceiling. Others may appear on an inside surface finish (behind a radiator cabinet or above a suspended ceiling) leading into a wall cavity and then connecting through holes or joints at some other location in the outside finish, or through weep or vent holes in brickwork (6). Some openings may develop after construction because of differential brick or block movement caused by shrinkage of mortar, thermal expansion and contraction of building elements, or deflection of beams. Other openings may result from an inappropriate choice of joint materials.

Air leakage through openings in the building envelope is caused by air pressure differences from one or more of three sources (7). The first is the stack effect or the chimney effect, which is created by temperature differences between the inside and the outside of the building. Second, a pressure difference may be induced across the building envelope by wind forces acting on it. Third, the operation of ventilation equipment may produce a pressure difference. The net air pressure difference across a wall or roof may be a combination of all three, and it is not the same at all parts of the building envelope. The size of this difference can also vary considerably – from 1 to 10 pascals (0.2 psf) in a small house, and periodically as high as 2000 pascals (42 psf) under the highest wind load, stack effect, and fan pressurization conditions, combined.

Stack effect. The stack effect results from warmer inside air having a lower density than the cooler outside air. This difference in density creates a slight outward positive pressure at the top of a building, while exerting a slight inward negative pressure at the base. Hence, air will tend to infiltrate at the lower levels of the building and exfiltrate at the upper levels. Typically, this represents a 50 pascal (1 psf) inside/outside air pressure difference at the roof line of a 25-story building in mid-winter, assuming that the neutral pressure plane is near the middle of the building. Simultaneously, there will be a 50 pascal pressure difference at the lobby level, which is acting inwardly (this air pressure difference is often the reason why outward swinging doors are difficult to open at the lobby level of high-rise buildings, and one reason for the use of revolving doors).

Wind. Wind causes infiltration on the windward side of buildings and exfiltration on the leeward side and on the sides parallel to the wind direction. Similarly, a flat roof will generally exhibit exfiltration because of negative pressure caused by wind. Since wind velocity increases with height, the difference in pressure across the building envelope also increases with height.

Pressure distribution on the windward façade varies from a maximum in the center, diminishing towards the perimeter. Suction pressures, on the other hand, may vary from a maximum at the perimeter, diminishing towards the center. The pressure on the side walls parallel to the wind is normally negative, but may change rapidly in value and even to a positive pressure as the wind changes direction.

If a window is opened on the windward side of a house, the interior pressure will rise and become almost equal to the pressure on the exterior wall facing the wind. The other walls and the roof, however, may undergo a substantial increase in air pressure difference, which in turn may substantially increase the exfiltration through the ceiling and the leeward wall the building.

Fan pressurization. Ventilation is usually provided by fans. They may be as small as a bathroom fan for a dwelling or fan units as large as a house for some types of commercial, industrial, and institutional buildings. Regardless of size, fans may either introduce or exhaust air. They may be set positively (supply rate greater than exhaust) to pressurize the building; this is done in high-rise structures to minimize the air pressure difference at lobby levels caused by stack effect. They may be set negatively (exhaust rate greater than supply) to prevent moist air from entering the roof or wall cavities by exfiltration; this could be done for an indoor swimming pool enclosure, for example.

Ventilation by fans may produce a small but significant air pressure difference across the building envelope. This force should be recognized during the design of the building envelope, as some fillers and sealants may be forced out at

(continued from previous page)

sion control. Air leakage through small joints and cracks can carry moisture more rapidly than diffusion though large areas of many materials. Stopping these leaks is largely a matter of detailing and workmanship – not necessarily of selecting and specifying new or unusual materials and products.

6 *Frost build-up along the parapet of this slaughter house is caused by exfiltration of warm, humid air that condenses and freezes at the coping. There are many possible routes by which indoor air may move within and leak out through the building envelope.*

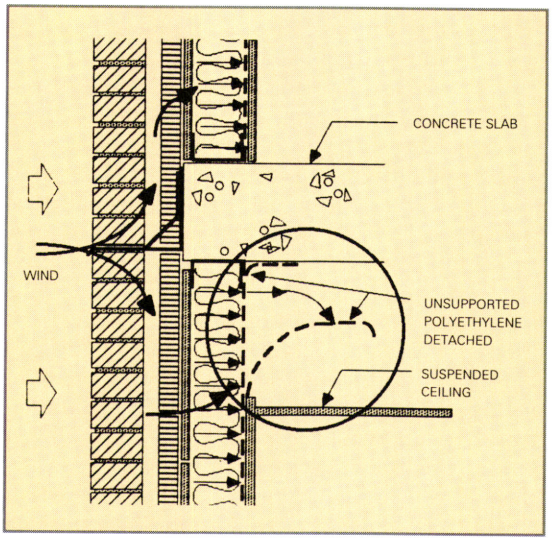
7 *Air barriers are subject to the pressure of air trying to escape or enter the building. They must resist the combined forces of stack effect, wind loads, and mechanical systems operating pressures. In the case of pressure-equalized (rain screen) walls, the air barrier must bear at least the force of the wind load on the façade.*

8 *Air leakage inward through walls caused by wind loads has been known to dislodge polyethylene membranes unsupported at the interior side. This underscores the need to support the air barrier within all details of construction – and to pay special attention to assemblies in which vapor barriers may inadvertently be forced to serve as air barriers.*

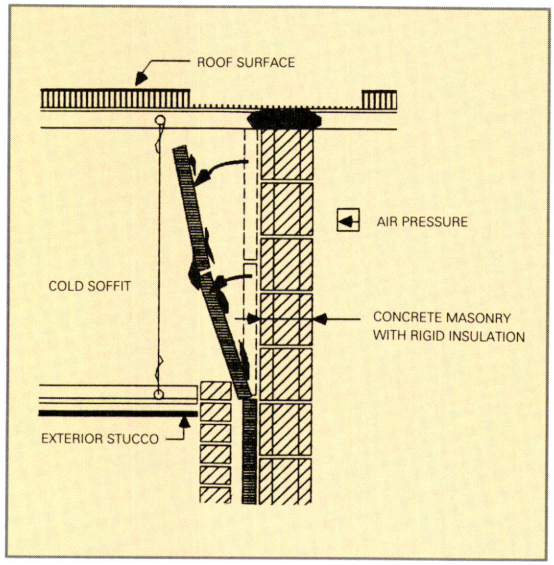
9 *In a relatively new shopping center, some of the insulation, attached by spot adhesive to a block wall, separated from the backup block and fell onto the soffit of the large overhanging roof. When wind action (a large door opened on the windward side) caused the building interior pressure to rise, the air pressure acting through the porous block wall apparently pushed the insulation with sufficient force to overcome the strength of the adhesive. This case illustrates that air pressure acts across the most air-impermeable material, regardless of whether or not it is designed to resist it.*

10 *In this curtain wall assembly, the vapor diffusion and air leakage control functions are both met by use of a galvanized sheet steel pan in the spandrel section. The sheet steel is impermeable to moisture and air and is positioned on the warm side of the insulated assembly. Systems like this are often subjected to peak wind-load air-pressure tests. Because the steel pan is usually sealed at the perimeter of the frame opening, it is part of a continuous, airtight system. It is also as durable as most other components of the wall.*

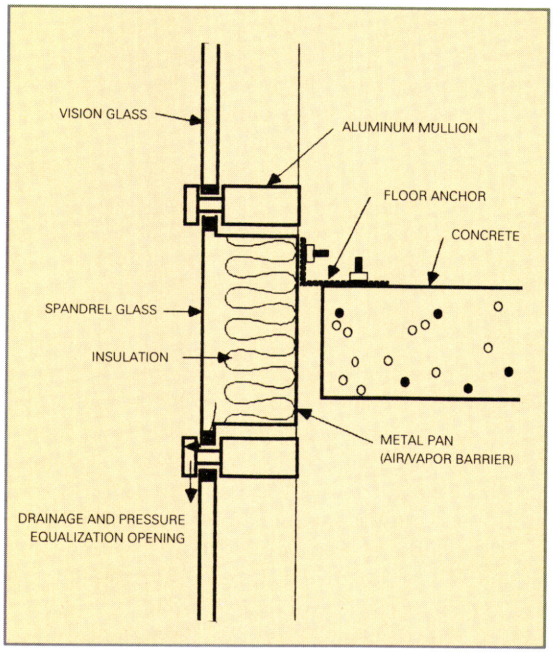
11 *In this case, polyethylene meets the requirement of a Type I vapor barrier and is positioned on the warm side of the assembly. The inside gypsum board, rather than the polyethylene, is designated as the air barrier. The polyethylene*
(continued on next page)



8 WIND PRESSURE DISCONNECTS POLYETHYLENE FILM FROM DECK



9 WIND PRESSURE DETACHES INSULATION FROM BLOCK WALL



10 COMBINED AIR AND VAPOR BARRIER

joints or come apart at seams under sustained pressures. This is known as creep failure.

Structural Considerations of Wind Forces

Occasional strong winds may produce high pressure differences across a wall, and may stress not only the cladding but those materials in the wall or roof cavity that have an inherent high resistance to air leakage (for example, concrete decks, roofing membranes, precast panels) or those materials (the air/vapor barrier) that are designed to control air leakage. If the air pressure difference exceeds the capability of the air barrier system to support the load, then air tightness will be destroyed and permanently increased air leakage will result (8). It is most important to realize that if an air pressure difference cannot move air, it will act to displace the materials that prevent the air from flowing (9).

Each membrane or assembly of materials intended to support a differential air pressure load must be designed and constructed to carry that load, or it must receive the necessary support from other elements of the wall. If the air barrier system is made of flexible materials, then it must be supported on both sides by members capable of resisting the peak air pressure loads; otherwise, it must support itself, such as a board product adequately fastened to the structure. Some membrane products may be satisfactorily adhered to a solid substrate to form a composite air barrier system (membrane plus substrate), for example, a rubberized-asphalt membrane applied to the surface of a masonry infill wall.

Air Barrier Design Requirements

The materials and method of assembly of an air barrier must meet several requirements if it is to perform the air leakage control function:

1 There must be continuity of the air barrier system throughout the building envelope. The air barrier material of the wall must be continuous with that of the roof (normally, the roofing membrane) and must be connected to the window frame.

2 The air barrier system must be fastened to a supporting structure to resist a peak wind load, a sustained stack effect, or pressurization from ventilation equipment. It must be sufficiently rigid to resist displacement. Moreover,

- The materials and configuration of the air barrier assembly must resist the highest expected air pressure load, inward or outward, without rupturing or detaching from the support.
- The assembly must not creep away from a substrate or part at a joint under a sustained air pressure difference (such as stack effect or fan pressurization).
- The deflection of the air barrier materials between supports must be minimized to prevent the displacement of other materials (such as insulation in cavities).

3 The air barrier system must be virtually air-impermeable. The recent publication, *Air Bar-*

riers (TEK-AID 07195), from Construction Specifications Canada, suggests that air-seal materials should not have an air leakage rate in excess of 0.1 L/(m^2)s (0.02 cfm/ft^2) at 75 pascals (1.57 psf). Materials such as polyethylene, many single-ply roofing membranes, gypsum board, cast-in-place concrete, metal, and glass qualify as low air-impermeable materials, whereas concrete block, acoustic insulation, open-cell polystyrene insulation, or fiberboard would not.

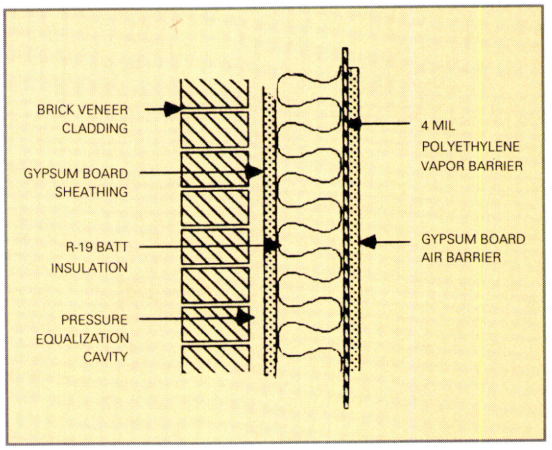
The metal and glass curtain wall industry, notably in the U.S., has adopted a leakage rate of 0.3 L/(m^2)s (0.06 cfm/ft^2) at 75 pascals as the maximum allowable for these types of wall construction. Many Canadian researchers regard this number as too high; in fact, in 1986, when the NRCC suggested that the maximum airflow rate of air barriers be related to indoor relative humidity (RH), they started with the American standard of 0.3 and – deciding that half this value was achievable in Canadian construction – recommended leakage rates of 0.15 at 75 pascals and indoor RH up to 27 percent, 0.1 between 27 and 55 percent RH, and 0.05 L/(m^2)s for RH over 55 percent. Even these values may be too high, at least in Canada; the more temperate climates of the U.S. may be less demanding, but remember that most of the Canadian population lives within 100 miles of the U.S. border. It is not difficult to find materials that have a leakage of practically zero. But it is the total assembled air barrier system – main areas plus joints – that must exhibit practically zero leakage.

4 The air barrier assembly must be durable in the same sense that the building is durable, be made of materials that are known to have a long service life, or be positioned so that it may be serviced from time to time. ASTM Subcommittee E 06.22 on Durability and Performance of Building Construction is organizing an effort to address the lack of in-service standards for both air and vapor barriers, but any results of this effort are a long way off.

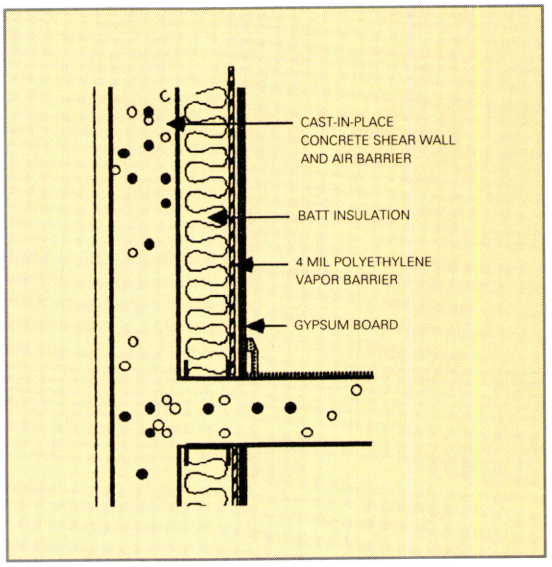
Wall and roof assemblies require air barriers and often vapor barriers, as well. They may or may not be the same material, but a combined system must meet the design requirements of both functions. It is common practice in Canadian curtain wall design, for example, to use a metal pan that serves as both an air barrier and vapor barrier at the inside of insulated spandrel panels (10). In wood frame house construction, on the other hand, 4 mil polyethylene is used as the vapor barrier, while the stiffer gypsum board interior sheathing is sealed at joints to create an air-tight envelope (11).

Position of the Air Barrier

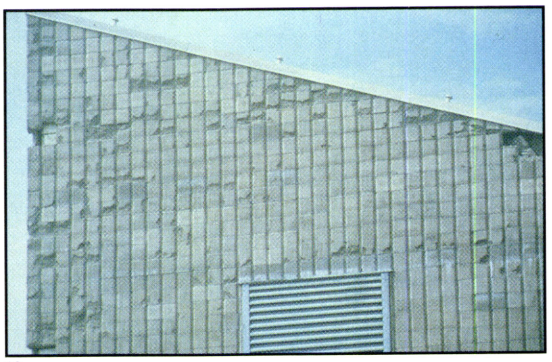
Vapor barriers are usually placed on the warm side of the insulation. They may also be positioned partway into the insulation but, for satisfactory performance, they should be no further in than the point at which the temperature of the inside air drops to its dew point.



11 SEPARATE AIR AND VAPOR BARRIERS



12 AIR BARRIER (STRUCTURAL CONCRETE) ON THE EXTERIOR



13



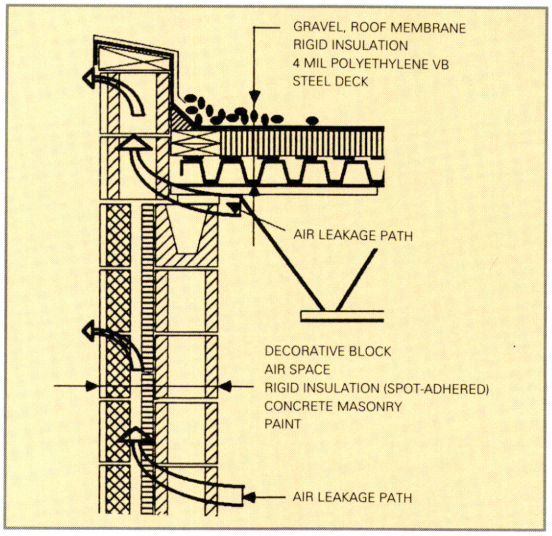
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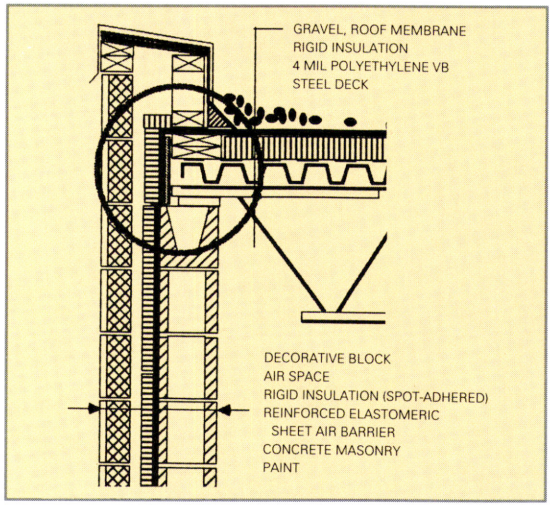
would probably meet the air barrier requirements if it were adequately supported on both sides. In most cases, however, it is the low-density glass fiber insulation that is used to support it on the cavity side. This support may not be sufficient for pressures caused by high winds. Another difficulty is that there is no adhesive known that will form a lap joint with the same strength as the polyethylene. The layer of gypsum board sheathing can meet all the requirements of airtightness if all joints are taped and a continuous air seal with other components of the envelope is provided.

12 *In this wall section of a typical medium-rise apartment building with a decorative, exposed cast-in-place concrete shear wall, the exterior façade is insulated on the inside. It has a 0.1 mm (4 mil) polyethylene vapor barrier and a gypsum board interior finish. In practice, the cast-in-place concrete exterior wall is a continuous and structurally adequate air-impermeable element of the wall, and therefore acts as the air barrier. The vapor barrier is the polyethylene, and as long as it, the insulation, and the interior surface of the concrete rear wall are in intimate contact, the wall will perform quite satisfactorily – as it has in many existing buildings. If the insulation is not in intimate contact with the concrete, convection within the cavity may seriously alter the thermal performance of the insulation.*

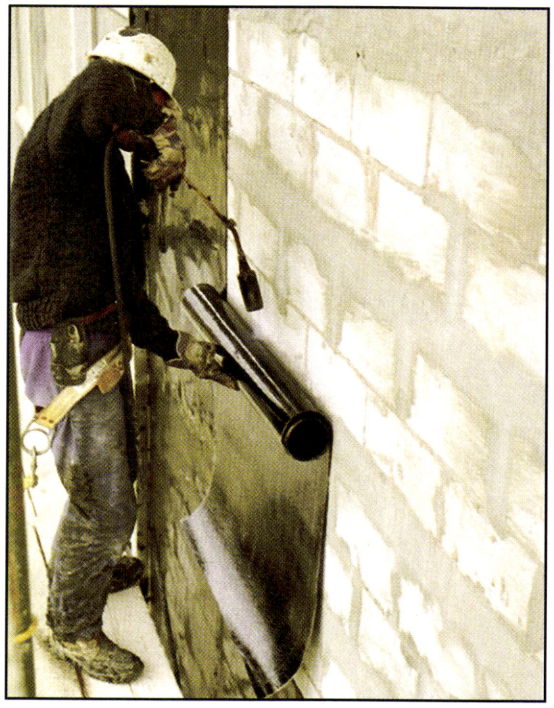
13, 14 *Severe spalling of this concrete masonry veneer occurred after only four years of occupancy, as a result of cyclical freezing and thawing of moisture leaking out from the cavity. Repair required stripping off the veneer and installing an air barrier behind the cladding like that shown in 16.*



15 AIR LEAKAGE THROUGH WALL AND ROOF/WALL JOINTS



16 WALL IN (15) RETROFITTED WITH AN AIR/VAPOR BARRIER



17

15, 16 This typical low-rise masonry construction offers many opportunities for leakage of warm, humid, indoor air through joints to the outdoors. Along the way, condensation and subsequent freezing may lead to spalling of the surface and the widening of joints through freeze/thaw action. A better wall section would include materials that are air-impermeable, such as parging or sheet or roll membrane with sealed seams. The air barrier must continue through the wall/roof intersection and join with the roof air barrier. In this case, the 200 mm (8") parapet block is replaced with a 100 mm (4") block, and the roof membrane (the air barrier) is fastened to wood blocking that is bolted to the steel deck. An air barrier material (preferably sheet steel or heavy roofing membrane) is then connected from the roof membrane to the air barrier material of the wall. The remainder of the components – the insulation, the masonry, the cap, and counter flashings – are installed afterwards, with the masonry and the insulation of the wall.

17 The problem building documented in illustrations 15–16 was retrofitted with an elastomeric membrane applied to the outside of the concrete masonry bearing wall, similar to that shown here. Because the wall is insulated on the outside of the membrane, the elastomeric sheet serves as both air barrier and vapor barrier. This approach is frequently used in new construction as well.

While it is preferable that the air barrier system be placed on the warm side of an insulated assembly, it is not essential, as it is with the vapor barrier. The position of the air barrier in a wall or roof is more a matter of suitable construction practice and the type of materials to be used. However, if this barrier is positioned on the outside of the insulation, as with the "EASE" assembly (External Air System Elements, a combination of fiberboard, housewrap, and fiberboard exterior sheathing), consideration must be given to its water vapor permeability, so that it does not act as a barrier to vapor on its way out from inside the wall assembly. This situation may be prevented by choosing an air barrier material or assembly of materials as above that is ten to twenty times more permeable to water vapor diffusion than the vapor barrier.

While the general opinion among most Canadian researchers and practitioners is that the air barrier should be placed on the warm side of the insulation (where thermal stresses will be minimized), there are many situations in practice in which the air barrier of a wall or roof is on the outside of the insulation and where it performs quite satisfactorily. This is true of both wood frame construction and some non-residential buildings (12). Regardless of where the air barrier is placed, the air barrier and the insulation must be in intimate contact, so there is no cavity in which convection can occur.

Joint Design

While the discussion above has been concerned with the flat areas of walls or ceilings, the joints between them present the most important design and construction problems. There are many kinds of joints, but for the purpose of this discussion, the most critical are the roof/wall connection, the wall/foundation connection, the wall/window or wall/door connection, soffit connections, corner details, and connections between different types of exterior wall systems, such as brick and precast concrete, aluminum curtain wall and brick or concrete, and steel siding and curtain wall.

To illustrate one joint design problem, consider a wall/roof connection typical of many small commercial buildings (13, 14, 15): A steel joist rests on load-bearing block; the roof consists of a conventional built-up membrane over an insulation layer, which is over a vapor barrier fastened to a steel deck. The wall consists of a decorative exterior 100 mm (4") concrete block, and a 25 mm (1") cavity (air space) with spot-adhered insulation. This type of wall is subject to serious air exfiltration problems through the masonry surface and joints, often resulting in spalled exterior block, icicles forming on the exterior surface, and rain penetration problems. No matter how well this wall section is built, its performance will not improve. It is the design that requires corrective measures.

To correct the situation, two design changes should be made. Since the wall is as permeable to air as fly screen (through the joints between the blocks), an air impermeable plane must be built

onto the block surface before the insulation is installed (16). The air barrier (an air-impermeable material combined with a block wall) may be cement parging (of questionable long-term performance) or perhaps a board product fastened mechanically to the block wall with all joints sealed, or a reinforced rubberized membrane (17).

Regardless of the materials chosen, the air barrier must be impermeable to air, able to support the peak pressure load, continuous from foundation to roof, and durable. The insulation could be attached to the air barrier (which could also serve as a vapor barrier) followed by an air space and the block veneer. This design change brings a positive solution to the airtightness function of the wall. The second design change involves the connection between the wall and the roof. The structure of the parapet is altered to allow routing of – and to provide support for – the air barrier, so that it may be joined without interruption to the roofing membrane.

This joint design problem illustrates how airtightness control, vapor diffusion control, and thermal resistance continuity can be achieved at the roof/wall junction without altering the architectural lines of the roof or the appearance of the façade. It does not add significant cost to the construction process. Joint design must, of course, take into account the sequence of construction and the jurisdiction of the various trades.

Conclusions

The function of the vapor barrier is to retard water vapor diffusion through an insulated building envelope. Vapor diffusion control is simple to achieve and is primarily a function of the water vapor diffusion resistance of the chosen materials and their position within the envelope assembly. The barrier should be clearly identified by the designer and clearly identifiable by the builder.

Air leakage control is a more complex objective, which must be considered as a separate and distinct function for any wall, roof, window, and especially joint details – even for the subgrade portion of the building envelope. The function of the air barrier is to eliminate the flow of air from inside to outside through the envelope and vice versa. An air barrier must be continuous, be structurally fastened or supported to withstand a peak air pressure load, and be virtually impermeable to the passage of air. It must be durable or easily serviced. Again, it is important that the designer clearly identify the air barrier and that the builder recognize it as such. It is desirable, but not essential, that it be installed on the warm side of the insulation, for improved thermal stability and access for future maintenance.

The vapor and air barriers may or may not be the same material; if they are the same material, then it must meet all the requirements of airtightness and vapor diffusion control. If the barriers are not the same material, then the vapor barrier material need meet only the requirements for vapor diffusion control and the materials designated for the air barrier need meet only the requirements for preventing air leakage.

Richard L. Quirouette ■

The author, an architect, is a principal of Building Science Services at Morrison Hershfield Ltd., Consulting Engineers, in Toronto, Ontario, where he specializes in cladding systems investigations. Before joining MH, Quirouette was a research officer with the National Research Council Canada, where he conducted field and laboratory tests on air barrier materials, developed the engineering basis for the rain screen system, and investigated energy performance of wall systems. He is presently conducting an extensive series of building envelope clinics for architects in many cities throughout the United States.

Recommended Reading

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Acknowledgment

Most of the theory, application, and recommendations in this article were developed while the author was a research officer at the Institute for Research in Construction, National Research Council Canada.

Recent Research References

Much air barrier research supports establishment of materials standards and test methods for both laboratory and field conditions. The reports listed below were prepared for the Canada Mortgage and Housing Corporation and are available from their Canadian Housing Information Center, CMHC, 700 Montreal Road, Ottawa, Ontario K1A 0P7 (613) 748-2367.

In the U.S., Subcommittee E 6.22 on Durability and Performance of Building Materials of ASTM is developing a draft performance standard on vapor and air barriers, and welcomes participation from architects. For more information, contact William Brown, National Research Council Canada, Ottawa (613) 993-9673, or John Vowell, ASTM, Philadelphia (215) 299-5496.

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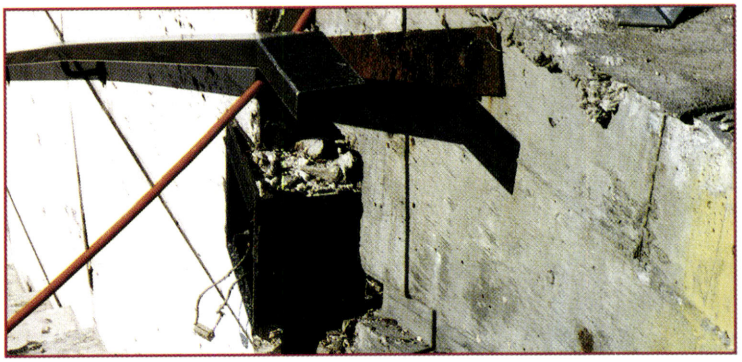
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Diagnostic Clinic 9/91
Corrosion of Anchors in Cavity Walls



1 *Inadequate paint protection of handrail support.*



2 *Corroded galvanized anchor with stainless steel shelf angle.*



3 *Shelf angle and flashing detail prevent moisture venting.*

Wall cavities are often moist environments that test the corrosion resistance of anchors supporting veneers and surface-mounted handrails, lighting fixtures, signage, and other features. Removal of a 30-year-old veneer recently exposed several symptoms of moisture-induced corrosion, each of which offers a different example of how preventive measures could have prolonged the life of the building envelope.

A handrail support attachment treated with a single coat of diluted red lead-oxide primer paint suffered more damage than unpainted steel shelf angles in an adjacent location (1). The "red lead" primer actually promoted premature deterioration in the moist environment of the cavity wall. These primers are intended for temporary protection in the open atmosphere; the Steel Structures Painting Council (SSPC) states that lead oxide coatings are not to be exposed to corrosive conditions – which humid wall cavities enveloped by concrete and/or masonry arguably are – for prolonged periods.

Instead of red lead primer, which may contain no more than pigment in a mild rust-inhibitor solution, a zinc-rich or epoxy coating applied in a one- or two-coat system (from Tnemec, for example) would have been more resistant to corrosion. Moreover, thorough surface preparation, such as blast cleaning (SSPC-SP6) to remove mill scale – the smooth, bluish black oxide layer formed during the hot rolling process – is necessary before priming.

Galvanized metals and aluminum may react when they abut dissimilar metals, mortar, or concrete, specifically in moist environments. In the cavity of this wall, an electrolytic reaction occurred where the galvanized inserts were connected with stainless steel stone anchors (2). This caused the galvanized attachment to give in to the stainless steel and corrode. Short of using 300-series stainless steel, attachments must be treated with an epoxy, acrylic, or zinc-rich coating specifically designed for concrete embedments (from Sika, for example). Epoxy coatings possess excellent dielectric strength that helps to electrically insulate steel from other metals.

In another case, detailing of the flashing and supporting steel shelf angle (3) prevented the escape of moisture, leading to the corrosion of improperly coated supporting members. In detailing exterior walls, architects tend to focus on removal of rainwater, a problem commonly solved with flashing, end dams, and weeping systems. However, water vapor may also accumulate via diffusion from the building interior, from high outdoor humidity, and from evaporation within the cavity of condensate and rain water absorbed by the cladding.

ASHRAE has for many years recommended installing a second series of ventilating weep tubes or relief vents below the shelf angle. This allows vapor accumulating below the flashing, which would otherwise be trapped in the cavity, to escape. Vapor relief vents also assist in establishing some measure of pressure equalization, central to rain screen design.

It is the architect's responsibility to protect building owners from the unnecessary burden of premature repairs. Preventive design may carry higher costs initially, but they are insignificant when compared to the expense of corrective repairs. Informed and attentive detailing to accommodate high levels of moisture in cavity walls includes specifying appropriate coating systems, selecting compatible metal attachments, and insisting on follow-up inspections. **George L. Maness** ■

The author, an architect, is the exterior systems consultant and a senior project manager for the New York firm of Helpern Architects.

Recommended Reading:

ASHRAE Handbook, 1989 Fundamentals, Chapters 20, 21 ("Thermal Insulation and Vapor Retarders") , and 22 ("Thermal and Water Vapor Transmission Data"), ASHRAE, Atlanta (404) 636-8400.

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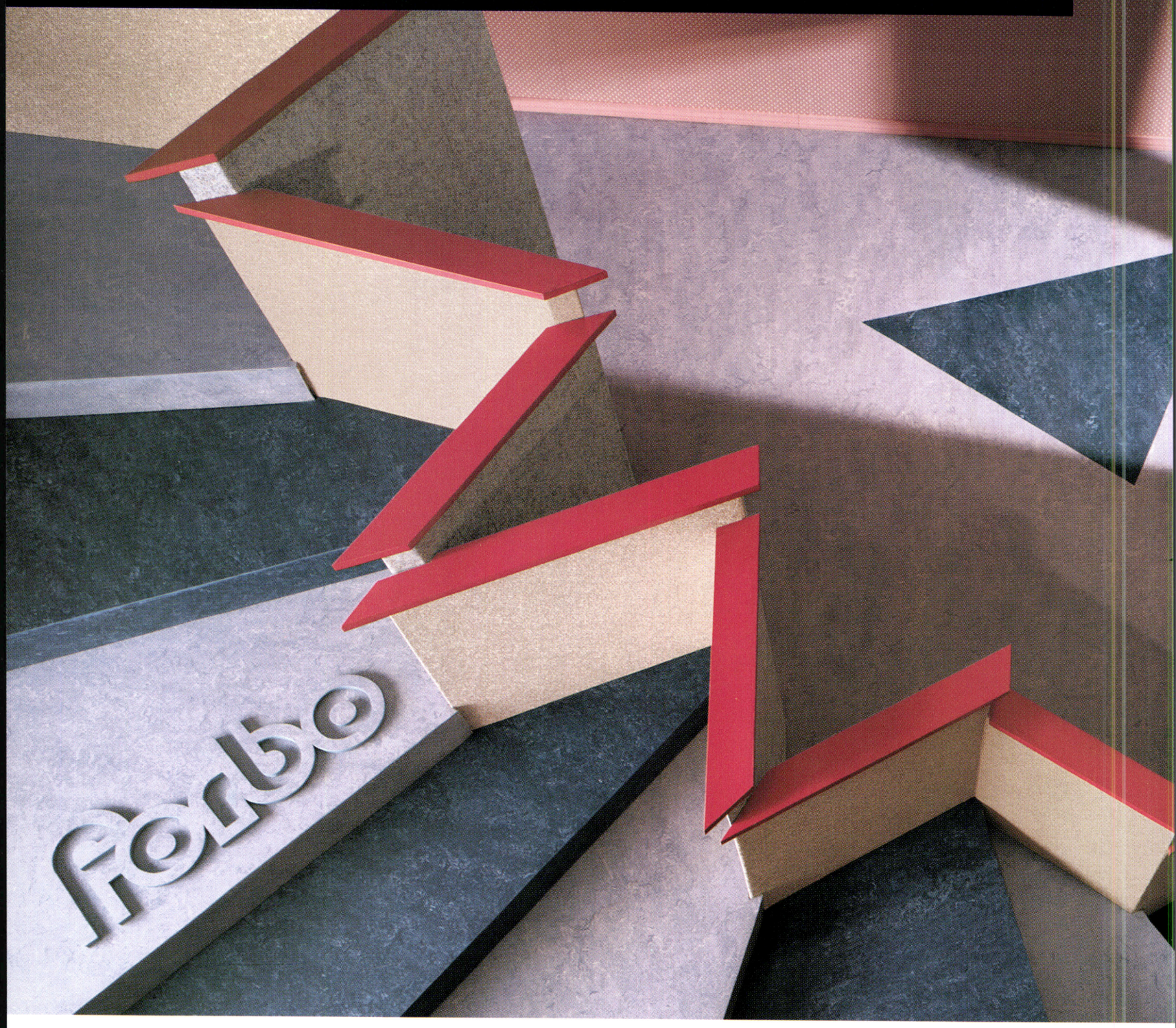
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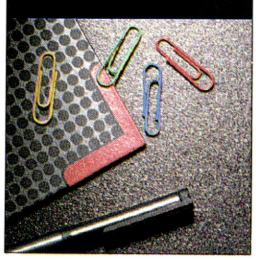
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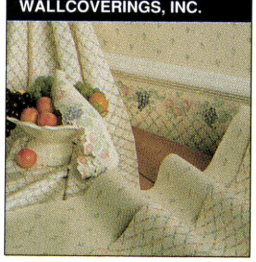


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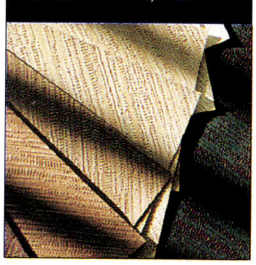
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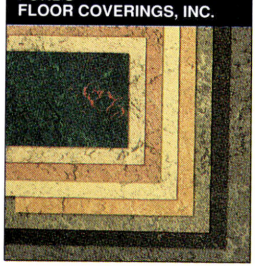
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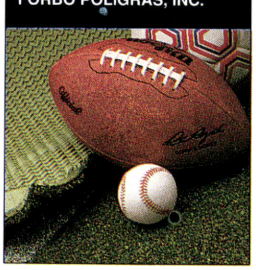
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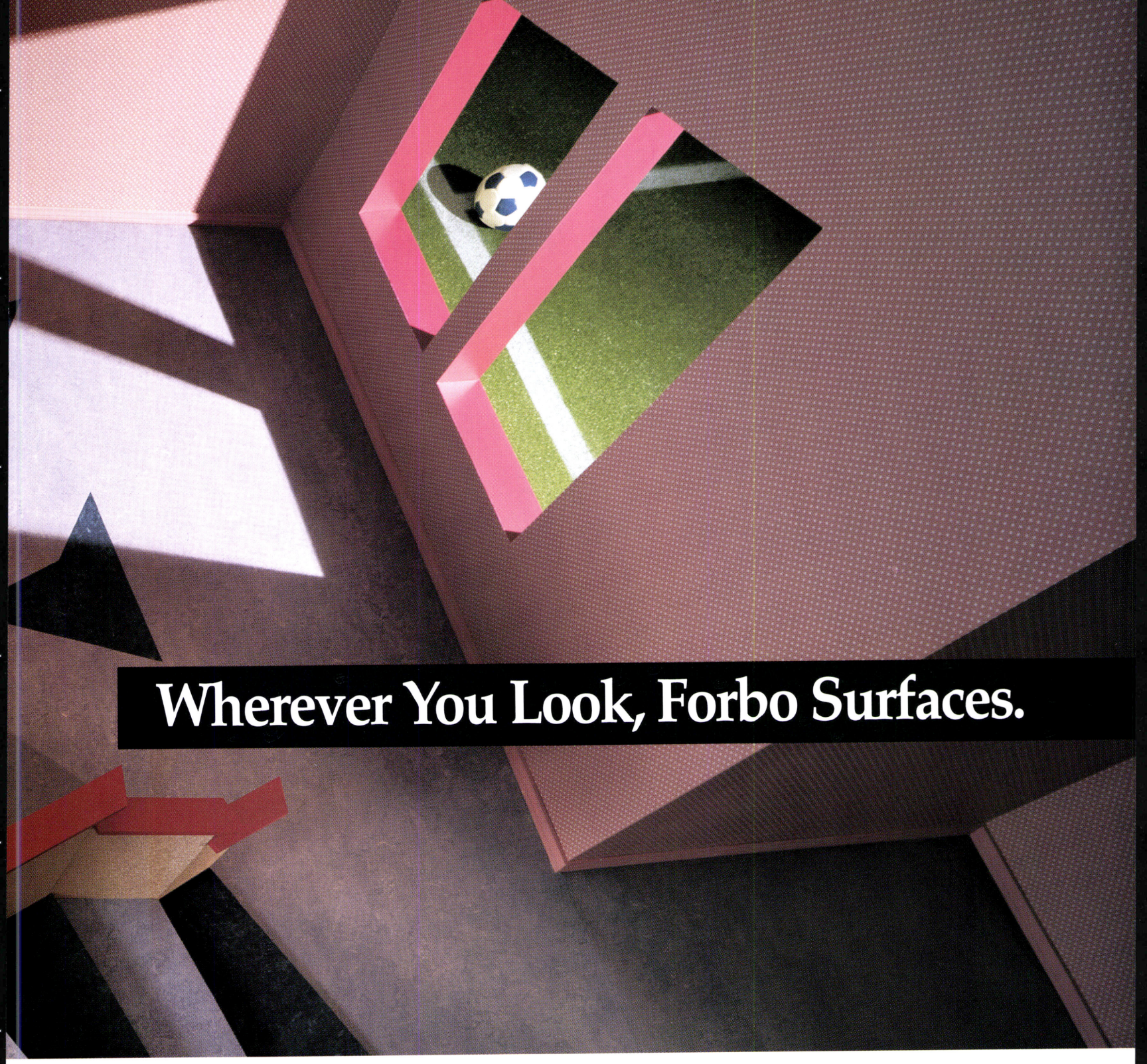


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Practice

Practice
Computers 59
Law 61

Dennis Neeley describes some of the ways computers will change practice and education.

Computers: CAD Practice and Education

We are in the CAD era. Computer-Aided Design and Drafting will change forever the practice of architecture and engineering, and the changes will go far beyond just CAD. The personal computer workstation, with its ability to store and process graphic and alphanumeric information, is the most powerful tool the architect or engineer has ever been given. The tool will redefine the roles of the design team members and will change education and licensing processes. These changes will lead to better design, fewer errors, better budget control, and more exciting professional practice. It is imperative that educators and licensing boards begin today to discuss the changes, since they are coming much faster than experts predicted only a few years ago. Within the next five years the world of the architect and engineer will be quite different.

The goal of the professional is not to sit hour after hour creating drawings and analyzing results, specifications, and budgets. Before the personal computer, however, such labor was necessary to accomplish the primary goal. Today most practicing professionals still spend their days tediously designing, drawing, and making lists by hand – drawings that will be drawn over and over again, and lists that will be revised repeatedly as the project proceeds through the design-build process. Within five years the personal computer workstation will render these processes completely obsolete.

We can now generate complete sets of standard working drawings for a house and specialized housing and commercial designs in a fraction of the time it took with hand drawing. In the near future we will get not only the drawings but automatic specifications and cost estimates as well; and the information about the design will be stored in a master data base that will be updated and shared by all professionals as the project proceeds through the design development process .

I am not writing about a "pie in the sky" future that will never happen. Some of what I have written about is already functioning; the rest is being worked on right now. In the near future you will see the time line of the project in the bottom right-hand corner of the monitor, the cost estimate in the bottom left, animated fly-throughs as you design, specifications and schedules created from the drawings, and access to manufacturers' information at your finger tips. This power is coming to you at a speed that is surprising even to the experts, on computers that are ten to hundreds of times faster than today's.

Architectural Education

While most schools have computer labs, the work there is often performed on outdated computers, too few in number, and is taught by computer "experts," not by design instructors. Much time is devoted to learning computer basics, rather than to creative work. This must change, but the advancements are coming faster than the schools are reacting. Every student should have a computer: It is the parallel bar of the future. While computers and CAD software have been weak in design and presentation in the past, this is no longer true. Design instructors who have been put off by computers need to look into the current state of the art. Design studies, massing, perspective renderings, and animation of spaces are easily and quickly created today. Tomorrow they will be even more spectacular.

Time that used to be spent mechanically creating a perspective, time spent in a shades and shadows class, time wasted coloring a presentation drawing may now be spent understanding the other disciplines involved in the design of the building, gaining knowledge of what is practical and possible in construction, studying the animation of shadows across the design, and in hundreds of other activities useful to students.

I have practiced architecture for more than twenty years and am aware that our profession is complicated and requires a vast knowledge base. I have been involved in the creation of CAD software and data storage and manipulation for the last eight years; I clearly see the electronic future moving at full speed into the practice of architecture. Automatic prompting of checklists, automatic code compliance, and research studies are all part of the future. The computer is a tool like no other that has ever come to our profession; we should not sit and wait for it to arrive before planning to deal with its effects.

Dennis Neeley ■

The author is president of ASG (Archsoft Group), Sausalito, California. ASG develops integrated architectural, engineering, construction, and facilities management CAD and alphanumeric Software. He is also a founder of Neeley/Lofrano, Architects, San Francisco.

Practice Points

More than 84 percent of contractors find that specifications have major omissions some of the time, and 50 percent say specifications sometimes require numerous modifications, according to the findings of a recent survey conducted by *ENR*. The contractors surveyed recommended removing boilerplate language and writing very specific specifications for each job. Contact ENR at (212) 512-2000.

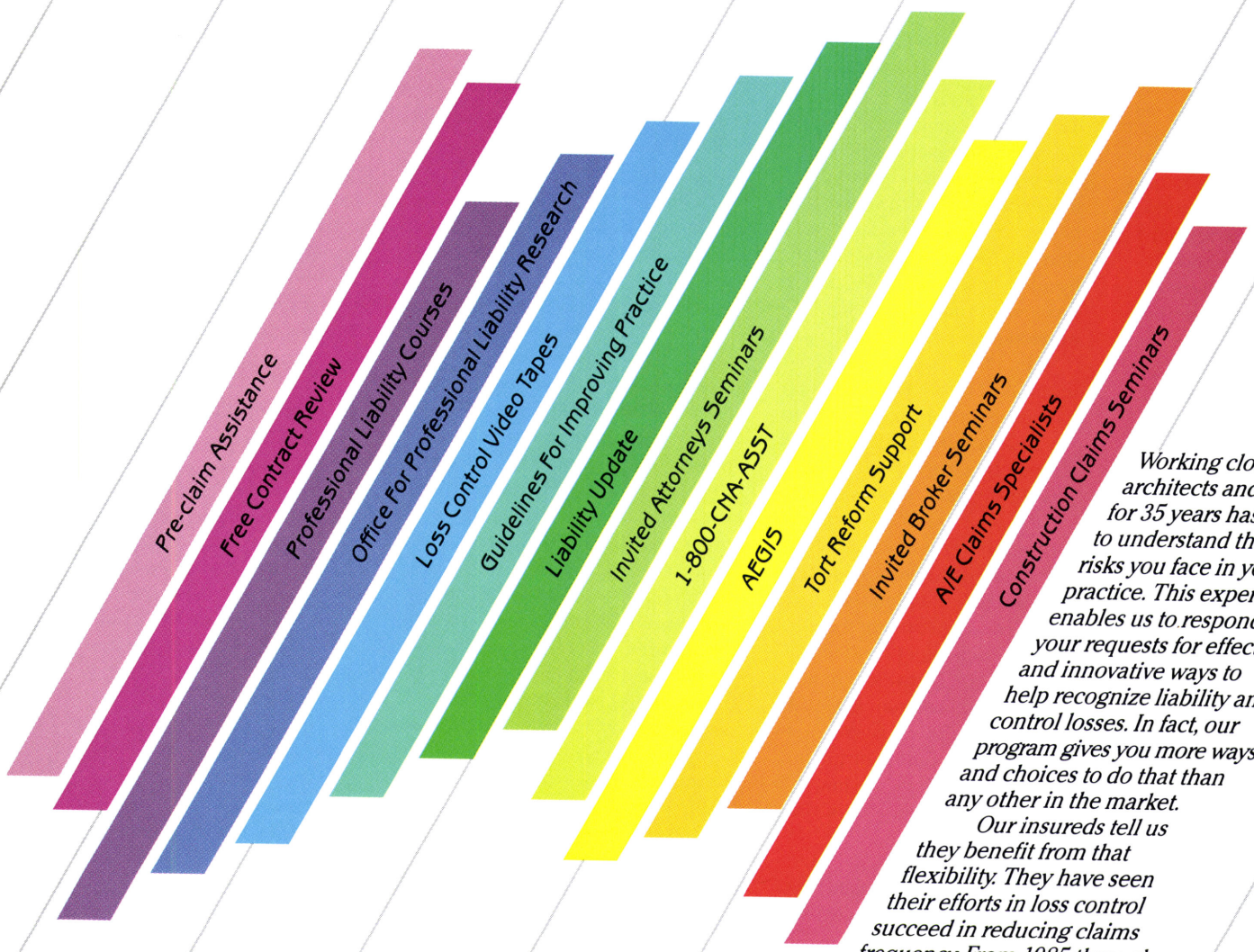
***CADD and the Small Firm*, a new book written by architects, provides suggestions for choosing hardware and software, training personnel, building a detail library, and creating an office manual. The book is $35 from the Boston Society of Architects, (617) 951-1433, ext. 221.**

With the A/E unemployment rates as high as 35 percent in some cities, *The Guidelines Letter* reports that young architects are finding work by offering specialized services such as designing retrofits for the handicapped, computerizing real estate maps, and measuring and drafting buildings for contractors. Call (800) 634-7779.

The leading causes of liability cases for A/E professionals are quality control problems, failure to recognize risks, and inadequate response to problems when they arise. According to a survey by *Communiqué*, a Monterey, CA, newsletter, such management failures can be recognized and solved before they happen. The newsletter is published by the DPIC companies, (408) 649-5520.

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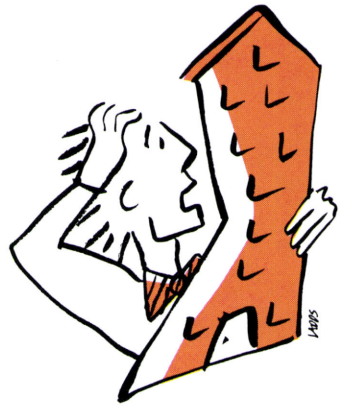
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Norman Coplan discusses a case in which owners sued an architect because of their disappointment in a design.



Law: Liability and Owner Expectations

Whether architects can be liable to a party, other than their client, for economic loss arising from the firm's faulty performance is an issue of significant importance to the profession. Some jurisdictions adhere to the rule that architects owe no duty to a third party for economic loss, since there is no privity or contractual relationship between them. Many jurisdictions, however, have rejected privity as a prerequisite to a firm's liability for negligence and may hold architects responsible for economic losses sustained by third parties such as contractors or bonding companies, who are involved in the construction process. In still other jurisdictions the issue is unsettled.

If any third party, even one not involved with the construction process, could seek relief for economic loss against an architect, the potential liability arising from architectural performance would be greatly expanded. With this concern in mind the Illinois Council of the American Institute of Architects intervened last year in an Illinois case of landmark importance (2314 Lincoln Park West Condominium Association v. Mann Gin Ebel and Frazier, Ltd., et al.). In this case the plaintiff, a condominium association representing 39 condominium unit owners, sought to recover damages from the architectural firm that had designed the project and from the builder who had constructed it. The owners claimed that numerous defects, caused by negligent design and construction, appeared in their units after they had purchased them.

The lower court dismissed the action against the builder on the ground that, pursuant to Illinois legal authorities, economic loss cannot be recovered on a negligence theory. The lower court, however, refused to strike the plaintiff's negligence claim against the architectural firm. The issue, certified on appeal, was whether an exception to the rule should be made "which would permit plaintiffs seeking to recover purely economic losses due to defeated expectations of a commercial bargain to recover from an architect or engineer in tort."

In earlier decisions the Illinois courts had held that policy considerations militate against permitting third parties to recover for economic losses (as distinguished from personal injury) owing to architects' negligent performance. The courts have thus upheld the distinction between tort recovery for physical injuries and economic loss arising from negligent performance. However, exceptions have been made in certain actions for malpractice or where a party intentionally or negligently made false representations.

The plaintiff in this case argued that architects supply information to others and therefore come within the exception permitting recovery of economic losses for the tort of negligent representation. But the court rejected this contention, stating that while architects do, in fact, supply information relied on by others, that information is merely incidental to the architect's primary function.

The plaintiff also argued that, if economic loss may be recovered in malpractice actions against certain professionals, there was no basis to treat design professionals differently. The court, however, indicated that in cases where a professional had been subject to liability for economic loss, the courts recognized an extra contractual duty not only to the client but to a group of persons the client intended to benefit. The same could not be said of the defendant architect in the case before it.

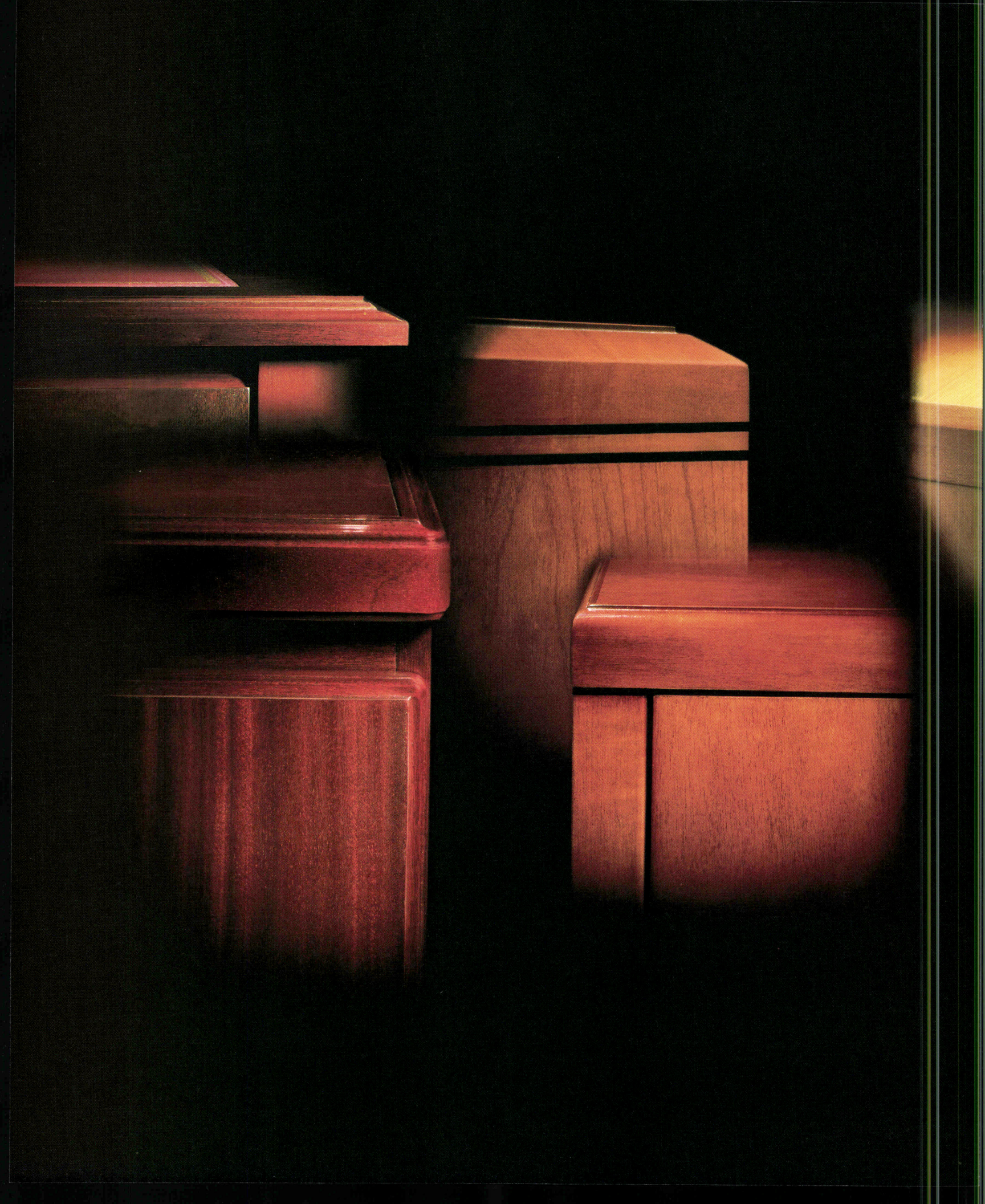
The Appellate Court pointed out that the plaintiff's real grievance was dissatisfaction with the condominium design and the failure of the building to meet the unit owners' expectations. Such a claim, said the court, concerns the quality rather than the safety of the building and thus is a matter more appropriately resolved under contract law. The architect's responsibility, said the court, originated in the contract with the original owner and, in these circumstances, the architect's duty should be measured accordingly. The Plaintiff was essentially seeking damages for a difference in quality. "There is room in the market for goods of varying quality, and if the purchaser buys goods which turn out to be below its expectations, its remedy should be against the person from whom it bought the goods based upon the contract with that person."

The court's rationale, in distinguishing between physical injury for which negligent architects would be liable and economic loss for which they would not, is reflected in the following quote: "The distinction that the law has drawn between tort recovery for physical injuries and warranty recovery for economic loss is not arbitrary and does not rest on the 'luck' of one plaintiff in having an accident causing physical injury. The distinction rests, rather, on an understanding of the nature of the responsibility a manufacturer must undertake in distributing his products. He can appropriately be held liable for physical injuries caused by defects by requiring his goods to match a standard of safety defined in terms of conditions that create unreasonable risks of harm. He cannot be held for the level of performance of his products in the consumer's business unless he agrees that the product was designed to meet the consumer's demands. A consumer should not be charged at the will of the manufacturer with bearing the risk of physical injury when he buys a product on the market. He can, however, be fairly charged with the risk that the product will not match his economic expectations unless the manufacturer agrees that it will."

In rejecting the right of a third party, not involved in the construction process, to recover damages for an economic loss arising from architects' negligent performance, the Illinois Court has established a significant precedent which narrows a professional's potential liability.

Norman Coplan ■

The author is a partner in the New York law firm of Bernstein, Weiss, Coplan, Weinstein & Lake.



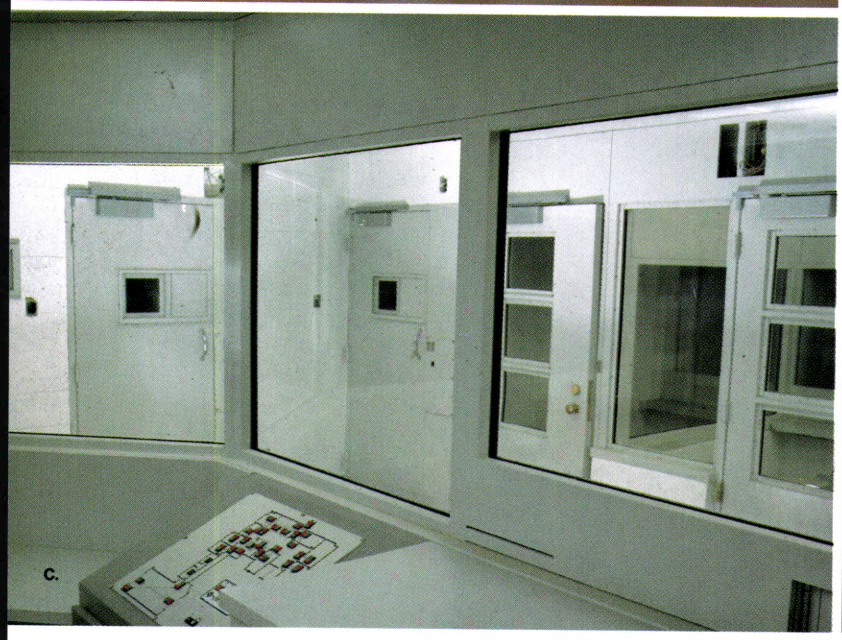

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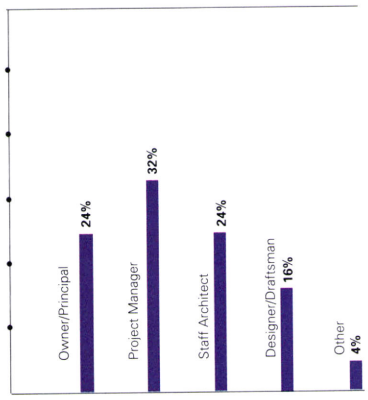
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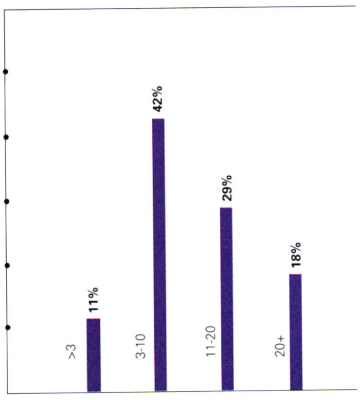
Reader Poll: Office Politics

Intraoffice relations are the subject of this poll, and the responses, divided about equally among respondents from different firm sizes, show strong polarities.

1 Role in firm.



2 Number of years in profession.



Previous P/A Reader Polls have presented opinions that came mainly from owners/principals in small firms. However, the 734 who returned this poll by the survey deadline comprised a balanced range of firm sizes and a fair distribution of staff positions.

On questions where degrees of agreement were called for, responses often showed a sharp polarity of opinions, characterized by nearly 50/50 percent splits. Researchers Morrison & Morrison say this seems to "indicate that the nuances of office politics are manifested through a great range of actions," and feel that many of these depend on firm size and structure and on the experiences and position of the participant.

Since the majority of the respondents to this poll were male (82 percent), and white (89 percent), findings concerning racial and gender bias are not conclusive.

The Respondents (Figs. 1–3)

Firm roles that are represented by those who completed the survey strike a good balance (Figure 1). Among the owners/principals, 64 percent are from small firms. Those with a 3–10 year professional affiliation are the largest group, 42 percent, followed by those with 11–20 years in the field, 29 percent (Figure 2). Males comprise 82 percent of the sample; of those who are owners, 8 percent are women. While 6 percent of the total number responding omitted answers to the question of race, 83 percent are white, nearly 5 percent are Asian (Figure 3).

The Firms (Figs. 4, 5)

There was also a good balance of sizes between the small, medium, and large firms (Figure 4). Of non-white respondents, 48 percent are employed by the mid-sized firms, and of all staff positions, 70 percent are in medium or large firms.

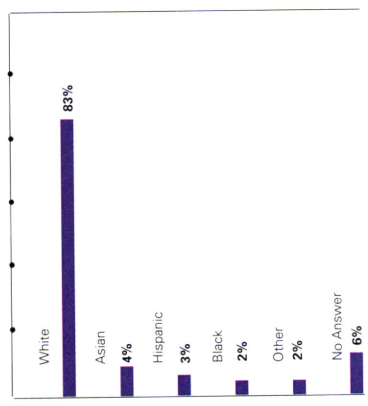
Individuals perform a full range of office functions in the offices of 39 percent of those surveyed (Figure 5); in small firms, 72 percent cover all bases. Firms with studios or project teams comprise 31 percent of the medium and 33 percent of the large firms reporting studio structure. Large firms are most apt to have departments (46 percent). Matrix structure, combining studios and periodic specialist input, was listed by 11 percent of these readers.

Office Conditions (Figs. 6–8)

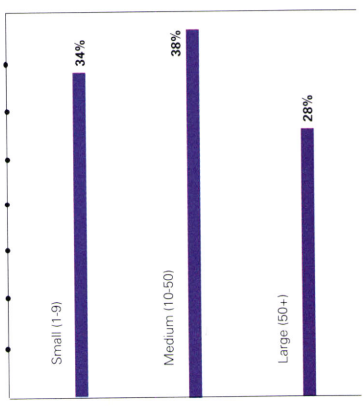
When asked to agree or disagree on several questions, those answering the poll were split close to 50/50 in many cases. Concerning office morale, 56 percent agreed that morale in their offices was usually high (Figure 6). The data show that 88 percent of the owners/principals saw morale as high in their offices, but 64 percent of the staff architects and 52 percent of the project managers polled disagree.

Given this dichotomy of views, however, it should be reiterated that most of the principals polled are in small firms (where 78 percent agree), while most of the staff positions are from the larger firms (where about 55 percent disagree).

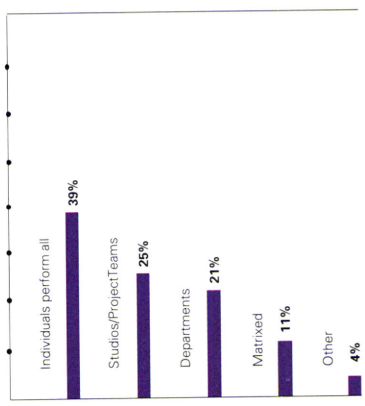
3 Race of respondent.



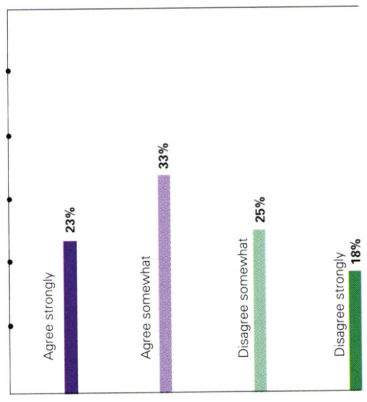
4 Size of firm.



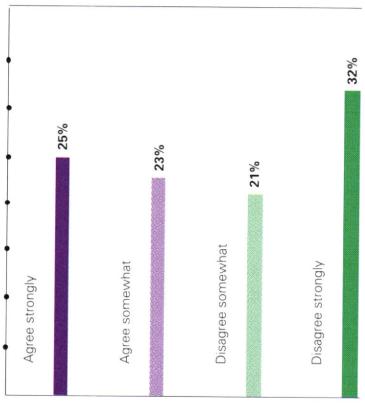
5 How is your office structured?



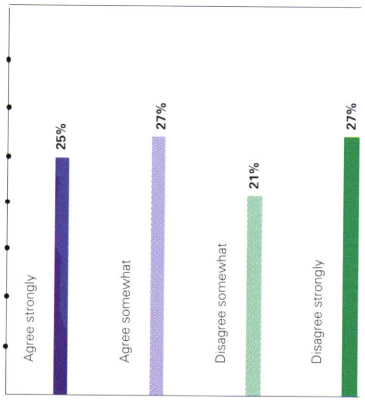
6 Morale in my office is usually high.



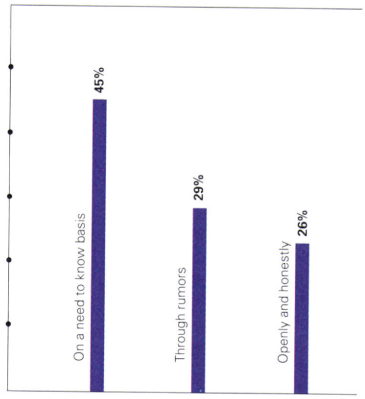
7 The office I work in is highly politicized.



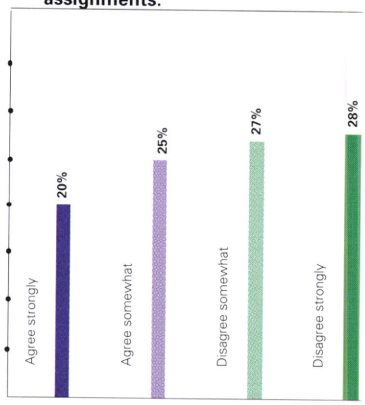
8 Aside from normal friendships, there are cliques in the office.



9 Communicatons about what is happening in my firm are delivered:



10 Staff members in my office jockey for recognition, position and/or assignments.



Perceptions about political factions and frictions within an office are noted to be dependent on the firm's size and a person's role. Although the percentage of those who disagree that their firms are highly politicized (Figure 7) form a narrow majority, the makeup of the group who feel politics flourish in their firms is telling. Almost 67 percent of the owners disagree strongly that their offices are highly politicized. Among all staff members, 59 percent see political activity in the firm. Only 21 percent of those in small firms identify political currents, compared to an overwhelming 75 percent in larger firms.

Another facet of office dynamics, cliques – aside from normal friendships – were perceived, and not perceived, by almost equal numbers (Figure 8). Again the makeup of the respondent profile and firm placement seems to have shown up: those in large firms (77 percent of those polled), and all staff personnel (an average of 50 percent) said that cliques existed.

Internal Affairs (Figs. 9–11)

In general, information within the firms is delivered on a need-to-know basis, rather than by either rumor or complete openness (Figure 9). However, 46 percent of those respondents in large firms reported that rumors were an important channel. In the overall poll, 29 percent said rumors were the main vehicle. Owners tend to think of communications as open and honest in their firms (63 percent). The lowest openness rating was among all staff architects (9 percent).

On the question of whether staff members in the firms jockey for recognition, position, and/or assignments (Figure 10), employees in large firms (72 percent) believe staff members try to engineer their fortunes. Those in small firms disagree most strongly (77 percent).

By a 58 percent majority, readers feel that ability, not politics, is the reason for promotions and assignments (Figure 11). Owners, as might be expected, agree strongly (71 percent), and 75 percent of the small firm employees also agree, 51 percent strongly. However, the breakdown of the 42 percent who disagree reveals that 62 percent of non-white responses indicated at least some level of disagreement. Gender had little to do with the ratings, as 58 percent of the males and 53 percent of the females agreed.

Individual Status (Figs. 12–16)

Asked if they agree that those in design roles are favored over production and other staff, 53 percent did not (Figure 12). Agreement came from an average of 55 percent of those in mid-size and large firms, in contrast to disagreement from small firms (67 percent). By role, 73 percent of the owners disagree in some measure, while 60 percent of the staff architects agree.

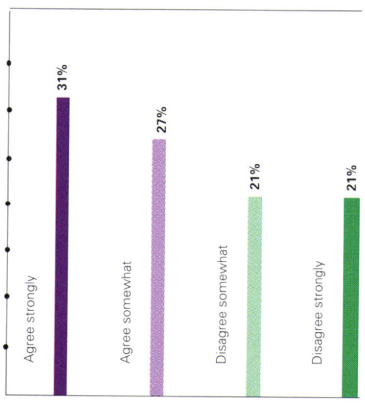
We inquired if respondents agree that computer design staff have lower status than non-computer staff in the office, and 65 percent said no, 38 percent strongly (Figure 13). The researchers point out that, "It should be noted that more readers in small firms did not answer this question (16 percent) than those in medium sized firms (9 percent) or large firms (2 percent), presumably because computer design positions are not present in these offices."

On a more personal level, we asked for agreement or disagreement that the reader is given as much responsibility as his or her capabilities permit (Figure 14), and most said yes (63 percent). Somewhat predictably, small firm members were more apt to agree (76 percent) than those of medium or large firms (56 percent each).

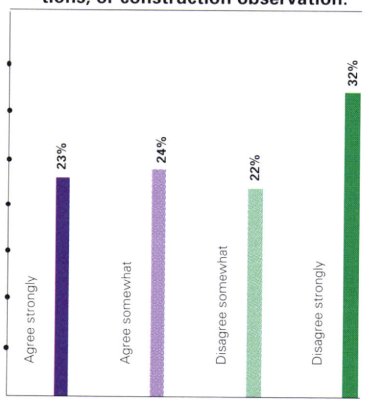
In affairs of the firm, do the readers have a fair say (Figure 15)? For the most part, those polled said they did or did occasionally. The largest numbers of those who did not (31 percent) are those in architectural staff positions (49 percent), drafting/other positions (40 percent), and in large firms (43 percent).

As to which of four areas of decisions those polled are asked

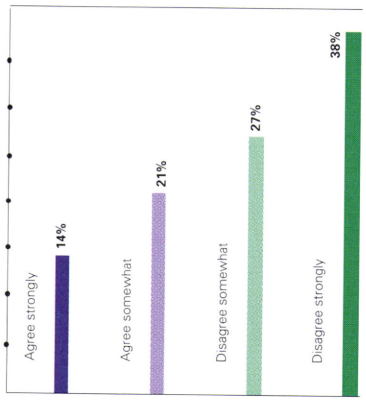
11 Promotions & assignments are awarded on the basis of ability, not office politics.



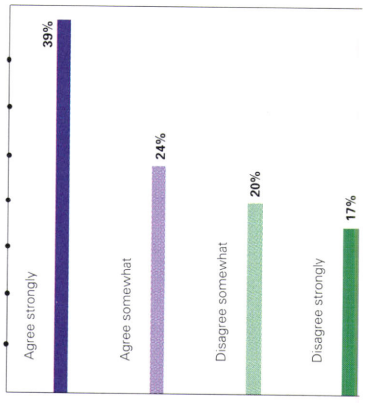
12 Management favors those in design over those in production, specifications, or construction observation.



13 Design staff working on computers have lower status in the office.

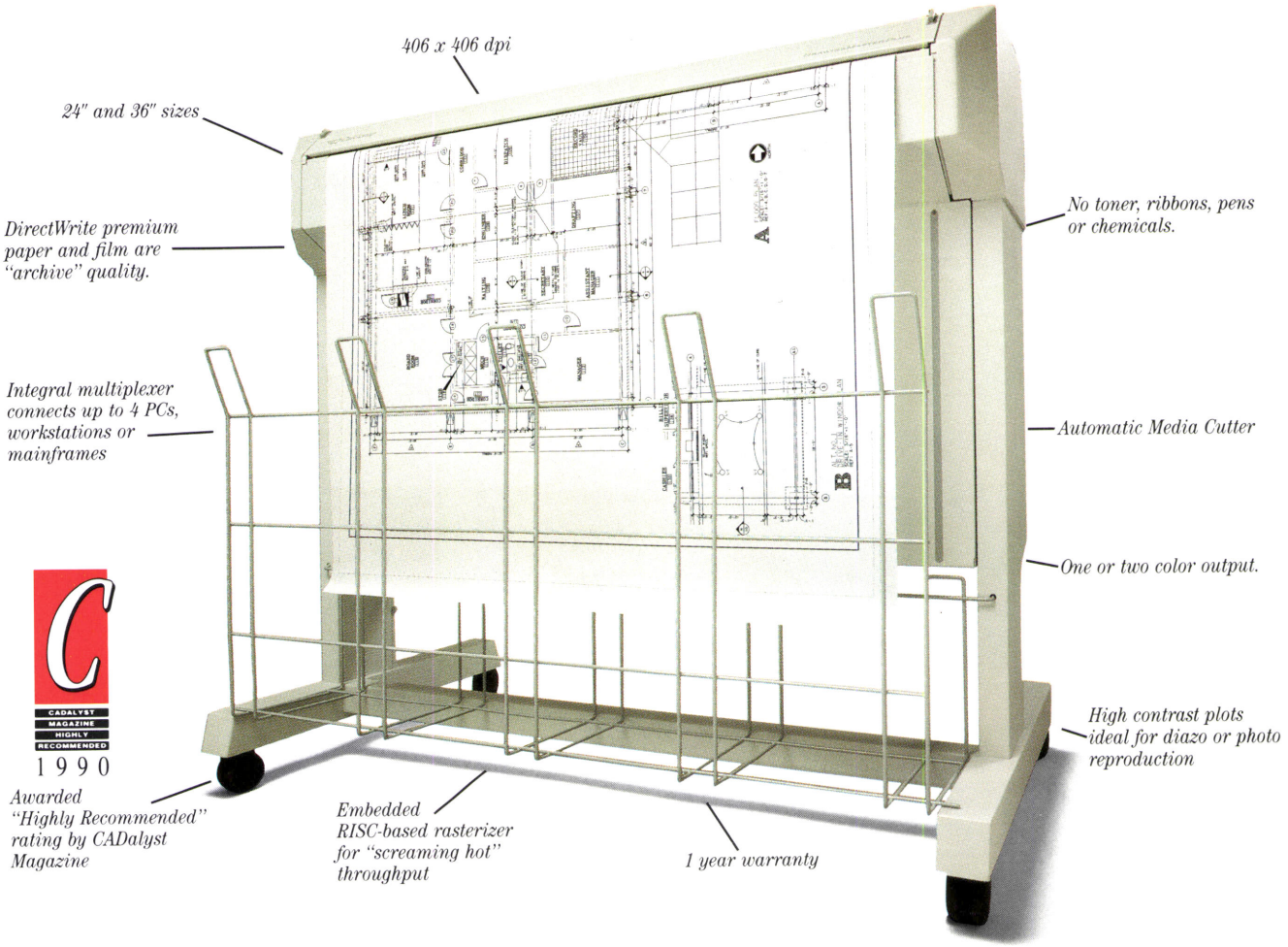


14 I am given as much responsibility as my capabilities permit.



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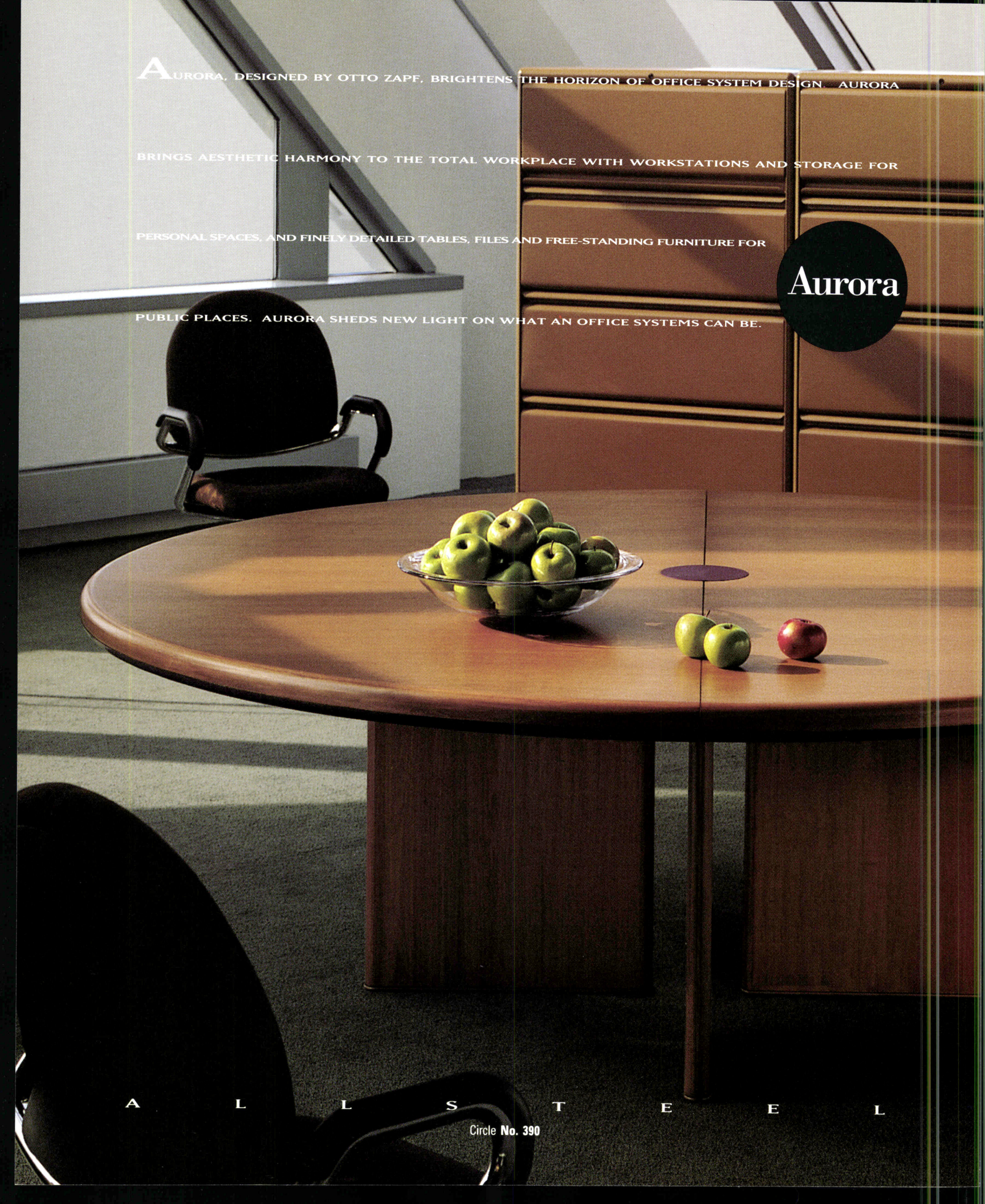
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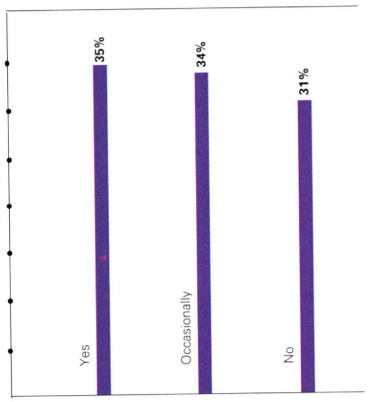
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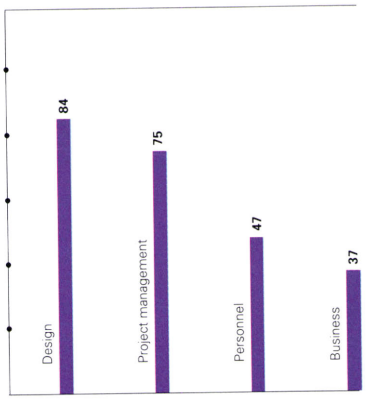


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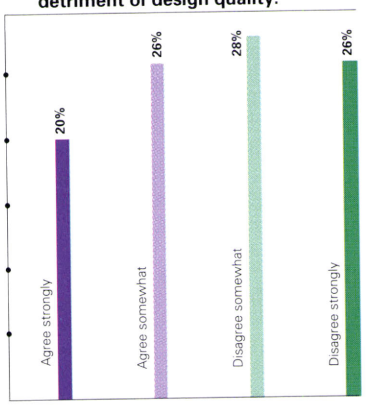
15 Do you feel you have a fair say in the affairs of the firm?



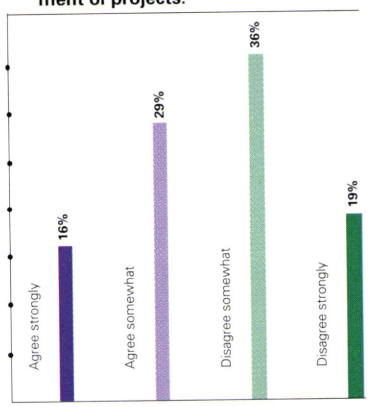
16 My input to decisions is invited on the following.



17 Project management goals in my office are emphasized to the detriment of design quality.



18 The firm's internal or staff costs are weighed too heavily in the management of projects.



to contribute, design and project management were most often selected (Figure 16). Personnel and business matters are less likely to involve those not in management positions.

Quality Obstacles (Figs. 17–19)

Are the firm's management goals harming design quality? Overall, 54 percent do not think so (Figure 17). Goals were thought to be detrimental to design quality by 52 percent of the project managers and 57 percent of the staff architects polled. Owners disagreed in some measure by 80 percent. The larger the firm, the higher the percentage of agreement.

On the question of whether internal/staff costs weigh too heavily on project management (Figure 18), 55 percent said yes. Agreement grows along with firm size – with small, medium, and large firm representatives posting 32 percent, 48 percent, and 57 percent agreement respectively. Just over 75 percent of the owners said they didn't think that project management was burdened by staff cost considerations.

Are clients allowed too great a role in design decisions (Figure 19)? The largest proportion of readers to agree were staff architects (60 percent), non-whites (60 percent), those in the profession under 11 years (52 percent), and drafting/other staff (51 percent). Owners, on the other hand, disagree (67 percent).

Dysfunctions (Figs. 20–22)

About one-quarter of these P/A readers report evidence of habitual race or gender discrimination in their office (Figure 20). Again, the larger firms are more likely to be faulted for these practices, 31 percent for large firms, 27 percent for medium-sized firms, and 16 percent for small firms. Discrimination is reported by higher percentages of females than males (37 percent versus 21 percent), and by more non-white respondents than white (43 percent versus 23 percent). Nearly 95 percent of the owners say there is no such evidence.

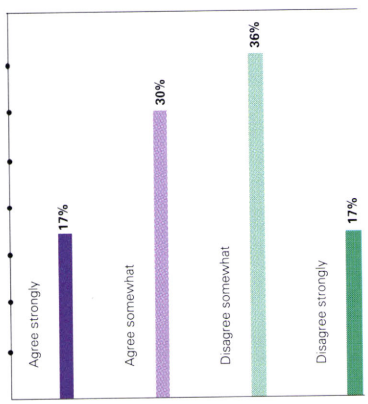
Asked which conditions are most disruptive to relationships within the firm (management attitudes, position snobbery, sexual prejudice, or racial prejudice), management practices were named by over 71 percent of those polled (Figure 21), including a surprising 55 percent of the owners reporting. Percentages in most respondent categories were in the 70 to 82 percent range. The next most disruptive condition, with roughly 32 percent of all responses, was job position snobbery. As might be obvious, large firm responses were strongest in this question, with 41 percent, while small firms reported 25 percent on the snobbery issue. Of the non-whites responding, 37 percent reported snobbery. About 20 percent of the females noted sexual bias, and 11 percent of non-whites cited racial prejudice.

The general mood among employees can be affected by numerous factors, and the questionnaire inquired which of four (management attitude and practices, disgruntled employees, client intervention, or interdepartment rivalry) were the most disruptive (Figure 22). Again, management attitude and practices came up with the most votes (64 percent). Staff architects called these practices the most disruptive (80 percent of this category), and even 33 percent of the owners identified them. In small firms, 47 percent saw management as the problem – vs. 73 percent of those in large firms.

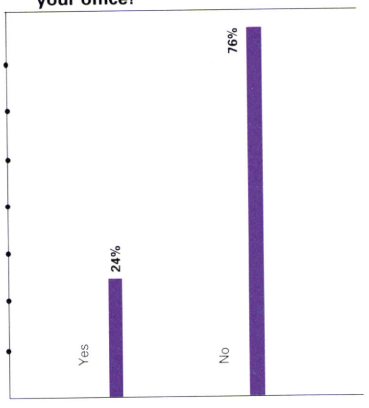
Client intervention is three times as likely to affect the mood of the small firm (33 percent) as that of the large firm (11 percent). Disgruntled employees accounted for 30 percent of the owner response.

The researchers summed up the results of this poll by saying "The harmony of intraoffice relationships and the general mood of employees is believed to be highly dependent on management attitudes and practices." Certainly, that is the clear answer given in these poll results. **Jim Murphy** ■

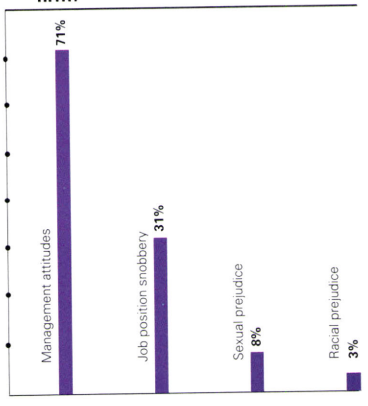
19 Clients are allowed to play too large a role in design decisions.



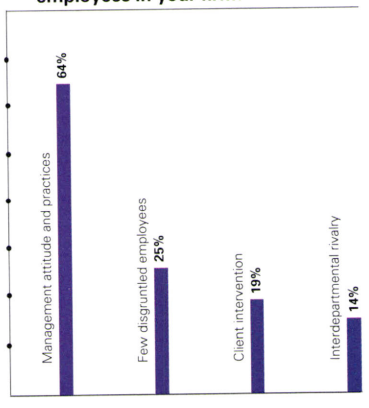
20 Do you see evidence of habitual race or gender discrimination in your office?



21 Which do you find most disruptive to intraoffice relationships in your firm?



22 Which do you find most disruptive to the general mood among employees in your firm?



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P/A Prospects

In this first installment of a series on clients, P/A Prospects talks with decision-makers in the field of continuing-care retirement communities.

At a time when architectural commissions are getting scarcer, it is all the more important that design professionals understand the interests and needs of clients. P/A Prospects is meant to give architects insight into the minds of prospective clients: how they judge architects' proposals, how they respond to their presentations, and how they evaluate them at interviews. Profiles of decision-makers inside client organizations will let architects and designers see how things look from the other side of the table.

Each issue of Prospects will examine a different well-defined market, with attention to how architects – experienced in that field or not – can land more jobs and serve their clients better. Prospects can also help clients compare methods of selecting design professionals.

We hope that Prospects will be of benefit to architects and clients alike by improving communication between them, and that this in turn will produce better buildings.

For our first issue of P/A Prospects, we have chosen the field of continuing-care retirement communities, in particular the "senior living" or "independent living" segments of these multifaceted projects. It must be said at the outset that this industry is not enjoying the boom we imagined when we selected it for this premiere issue. Yet the market has maintained its reputation among architects as a good new field to enter, despite the well-publicized financial difficulties of a handful of projects. Demographic studies show steady growth in the senior segment of the population; the senior living industry, however, seems to be taking something of a breather after its rapid growth in the mid-1970s and before its inevitable resumption of growth in years to come.

All of the executives we interviewed spoke about mistakes that had been made by some players in the industry in the early days, and of corrections that are now taking place both in the personalities and the pricing of these facilities: "Shake-out," "cleansing," "consolidation," are terms they use to describe what is happening in the industry today. The firms active today seem proud survivors; in fact, they have in many cases taken over communities from defunct organizations which they perceive as misguided from the start. For architects, this can translate into commissions for renovating existing facilities. And the *(continued on next page)*

Continuing-care Retirement Communities

"The architect wanted to change our room sizes for the sake of his roof lines."

developers who are building continuing-care retirement communities from scratch are stronger for having learned their lessons. Even in this period of adjustment, then, there is interesting work to be had.

The field also offers an unusually wide range of client organizations. Many continuing-care retirement communities are built by development companies, some of which are quite small and some of which are branches of huge corporations; others are built by existing hospital complexes or other institutional clients; and still others are built by non-profit organizations created specifically for the purpose. What most of these clients have in common are established prototypes for the apartments and the common spaces, which they expect the architects to follow or at least to use as points of departure.

There are today approximately 700 continuing-care retirement communities in operation. A "continuing-care retirement community" is, of course, more than a building. These communities offer older people a long-term contract for housing and services. For an entrance fee and a monthly fee, residents have lifetime use of an apartment and are offered a range of services that includes meals, cleaning, laundry, and the like. The apartments are designed to serve as the kind of independent, smaller home to which people might move after retirement. The package also typically includes health care; most projects comprise components with increasing levels of care so that the dislocation that all too often accompanies physical decline can be minimized. The "continuum of care" these projects can provide begins with "independent" or "senior living" units for those residents who have no need of daily medical assistance, then offers "personal care" or "assisted living" units to those residents who, while still living in separate rooms, require some staff attention, and finally it includes traditional nursing home facilities.

Certainly the close availability of medical care is an important part of the appeal of these projects. But first and foremost, these apartments and the accompanying services are sold as a lifestyle, with the care issues more implicit. In the words of one client, a senior-living community is "a service program that you're building a building for." The program comes with communal facilities, housekeeping, meals, and other amenities, but each unit must be sold as a home.

A continuing-care retirement community thus presents a challenging design problem. These projects require the creation of an ensemble of apartments and public areas, in an attractive whole, which can entice retirees to sell their houses and invest instead in a package of services of which an apartment is a major part.

Even within the industry itself, the understanding of the market, of what seniors are looking for, is still evolving. The field right now is in transition from an experimental phase, where different approaches were formulated, built, and tested in the marketplace, to a more general consensus on what works and what doesn't. The lessons of the past decade have shaped a more fit model.

Not a Nursing Home, Not a Hotel

The first of these lessons is that such communities are a type of project unto themselves, and ought not be conceived as re-tailoring of other building types such as the nursing home or the hotel. Neither of those two types, however radically modified, proved to be a viable model. For starters, a nursing home is for people who cannot fully care for themselves, which is assuredly not the case for the clientele of a retirement community. Although residents are comforted by the knowledge that medical facilities are near at hand, they certainly do not want to be consigned to them today. The successful continuing-care retirement community will offer them a new, hassle-free life-style in a new home; to sell itself successfully, the community must never remind the residents of the rigors of old age.

The psychology at work here is sometimes subtle. Architects who have educated themselves in the literature of geriatric care may propose, for example, grab bars in the showers, or light switches lowered to 36 inches. Clients have found, however, that prospective residents feel uncomfortable with what they perceive as reminders of potential feebleness, or even as an affront to their vitality. The issue here is selling the units; it is useful to make the addition of shower grab bars simple should they ever become necessary. But as one potential resident, confronted by an electrical outlet 24 inches off the floor, asked, "I'm only going to plug in this lamp once before I die, so why does the outlet need to remind me that I'm old?" The target audience for these communities is most often sophisticated and brutally honest people whose self-awareness should not be underestimated.

Nor has the hotel model been successful. Again, the central issue is that these communities must be convincing homes for their residents. The similarity of one project to another, which might comfort the traveler, does not make sense for people who may stay for a decade or two. Clients have found, in fact, that prospective residents want to feel that, although they have sold their houses and moved, they are still part of the larger community in which they have lived their adult lives. They want a sense of continuity. For this reason, senior living communities that are tailored to the local vernacular in both plan and appearance have proved easier to sell.

What has proved a good, if approximate, model for these projects is the standard multifamily housing complex. In fact, one executive refers to these projects as "embellished multifamily housing," the embellishment being that they are designed not to inhibit use by elderly citizens. This attitude is both realistic and harmonious with the market, and serves as a good starting point for an understanding of the issues involved.

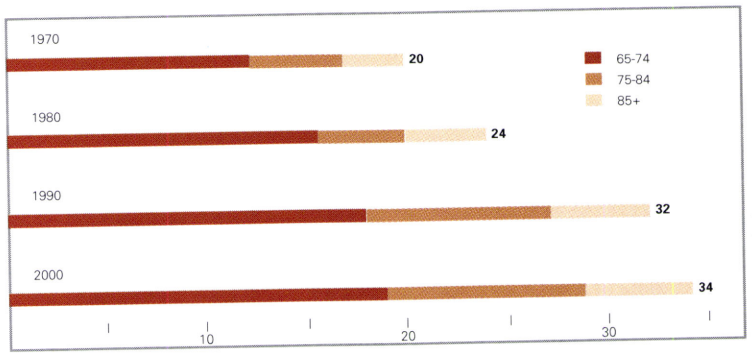
Another change in the nature of these communities has to do with their pricing. Retirement communities were originally conceived of as late-life alternatives for the affluent, with the idea that there was greater profit to be made in catering to a wealthy market segment. The communities built early on were rich with amenities and expensive to build and maintain. This limited market, however, was not able to support the number of units built in some regions. As lenders took over the more troubled projects, and others changed hands less drastically, membership prices have been adjusted downward. Of course, the effects of the slow economy on real estate in general have had a marked impact on these projects as well. As one client pointed out, the seniors

"We don't want vanilla design, but we do want whatever flavor is the favorite of our prospective residents"

have to sell their houses to join a senior living community, and the cash value of the sale is directly related to their purchasing power in the retirement community marketplace.

Know Your Client's Business

The clients profiled here represent a wide variety of organizations, each of which selects architects and works with them in a unique way. There are a number of concerns, however, that they share across the board. Foremost among these is the importance of the architects' having a solid knowledge of the business of continuing-care retirement communities — not just of the design issues, but of the entire business. Architects would do well to understand the demographic, financial, and community issues that determine the success of these projects before sitting down to talk with a prospective client. Probably the best place to start is with the two industry organizations: the National Association for Senior Living Industries (NASLI), which represents for-profit developers, owners, and operators of continuing-care retirement communities, among others; and the American Association of Homes for the Aging (AAHA), whose members are primarily non-profit organizations. Both are excellent resources; and we thank both organizations for their help in the preparation of this article.



Growth of the Elderly Population (Millions)

These clients also want a firm that will understand and respect their experience in this field. As opposed to most developers, these clients want to work closely with their architects as members of the design team. These projects have complicated programs, and the clients have strong ideas, reinforced in the field, about how, for example, the common areas should interrelate; most have already had trouble with architects who challenge such ideas in an uninformed way. The size and configurations of the units themselves is another issue in which clients rightly consider themselves expert. "The architect wanted to change our room sizes for the sake of his roof lines!" complained one client. Architects involved in this field will have to take the clients' direction very seriously, even on specific items, because clients usually understand better than anyone else how these items can affect sales.

In many cases, before architects are even interviewed, clients have analyzed the site (or the existing facility) in-house and developed their own program. Therefore the architects' assignment is to package the client's program in an attractive yet affordable facility, to get the necessary approvals, to produce an accurate set of drawings, and to make sure the project is built in accordance with those drawings. The client also frequently relies on the architects for specific knowledge of the area, from the intricacies of local approval politics to the community's stylistic preferences.

This leads to another issue. The appearance of these communities is extremely important to their acceptance by the local senior population, and clients generally look to the architects to give the project the proper look and feel inside and outside. Rarely can architects give free rein to their creative impulses, for the project must appeal specifically to a generally traditional group. This leaves little room for risk-taking aesthetics, which may disappoint some architects. "We don't want vanilla design," says one client, "but we do want whatever flavor is the favorite of our prospective residents in that area."

This is the challenge of designing a continuing-care retirement community. It is a modern marketing concept, a communal facility that must give each resident the feeling of living in his or her own traditional, independent, and individual home.

The profiles that follow are based on interviews with a variety of different types of clients in the continuing-care retirement community industry. We have asked them how they find the firms they interview, what they like to see from an architecture firm in a proposal or during an interview, and how fee issues influence their decisions. As you will see, various clients have ways of selecting architects that are sometimes diametrically opposed. In approaching any potential client, architects must have a clear understanding of what that client hopes to learn from their presentations.

What we are also hoping to impart here is some indication of what was universally cited as the quality clients are seeking in an architecture firm: an understanding of the nature of their business from a marketing-oriented, dollars-and-cents perspective. It is this necessity of understanding clients and their business from the inside, and translating this understanding into design and then into finished buildings, that drives P/A Prospects in this and future issues. We think it is important to stand in your clients' shoes. We believe that is one way to make better architecture. **Peter Morris Dixon** ■

The author has several years of experience marketing professional services, and now works with Design Link, a New York firm that helps clients find architects and designers for their projects.

References

American Association of Homes for the Aging, 901 E. Street, NW, Suite 500, Washington, D.C. 20004. (202) 783-2242.

National Association for Senior Living Industries, 184 Duke of Gloucester Street, Annapolis, MD 21401. (301) 858-5001.

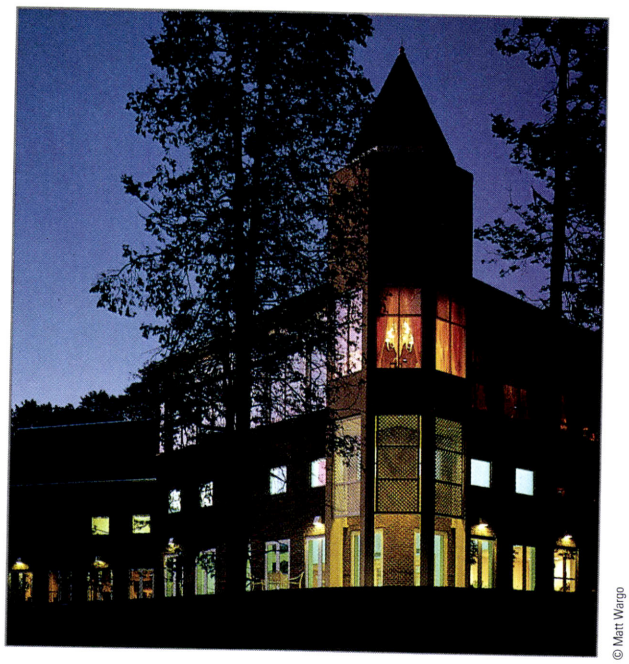
The Marriott Corporation

"If someone has lost a ton of money, more than likely we'll both be unhappy."

Address: Marriott Int'l. Headquarters, Marriott Drive, Washington, D.C. 20058
(301) 380-9000
Contact: Gary Steiner, Director of Design Management
Number of Continuing-Care Retirement Community Projects: 11
Number of Units in Smallest Project: 130
Number of Units in Largest Projects: 497
Total Number of Units: 3500

The Marriott Corporation, one of the bigger corporations to enter the senior living community marketplace, has a more complex internal structure than most smaller developers. The Design Management department of Marriott's Architecture and Construction division is responsible for procuring, monitoring, and supervising architectural services for each of the corporation's operating divisions. Gary Steiner is the Director of Design Management assigned to Marriott's Senior Living Services division, and he and his staff act as owners' representatives throughout the design process for all of Marriott's senior living community projects.

Steiner and his staff have a group of design firms with whom they like to work. Any new firms Marriott begins to work with are likely to be in the locale of a specific project. Steiner is used to getting many promotional packages from architects (fewer since Marriott's downsized development plans have received wide publicity), and although he reviews them all, he says he dismisses most. He is looking for experience with senior living communities specifically, "not some apartment houses and a doctors' office." Multifamily housing experience, however, is a strength. He likes a firm to have some nursing home experience – all of Marriott's senior-living communities include nursing homes – but he discounts the value of hospital experience: "The work of hospital firms always seems to have a medicinal taste, and they have a hard time creating a residential feel," he says. To find firms to interview, Steiner turns to AIA listings, to those who present themselves as experts at trade shows, and to lists that the industry organizations, NASLI and AAHA (see p. 71), provide of design firms who have worked for their members.



© Matt Wargo

The Quadrangle, Haverford, Pennsylvania. Architects: Wallace, Roberts & Todd, Philadelphia.

When they begin to consider firms for a particular project, Steiner and his staff typically send out a sophisticated request-for-proposal package to four to six firms who have been closely screened, although in some instances they may approach only one firm with which they have worked before. In their proposals, the firms are asked to provide a breakdown of manpower assignments according to task throughout the project, and their responses are analyzed to gauge each firm's understanding of the project and of the role Marriott wants them to play. For example, Marriott comes to the project with a prototypical "kit of parts" for their Stratford Court continuing-care retirement communities and their Brighton Gardens assisted-living communities, and also does a good deal of site-planning in-house before they commit to a site; so a firm that gives the manpower breakdown a heavy bias towards early design will be seen as misunderstanding the services Marriott is looking for. "If, on the other hand, a firm is biased away from the construction documents phase, and is heavy on construction administration," says Steiner, "this tells us that they like to pick up their errors in the field, which is not our way of working."

Because of Marriott's corporate structure, the package of services they are looking for differs somewhat from that sought by developers. In addition to the kits of parts and the site-planning provided by their own Design Management architects, all construction, administration, and supervision are taken care of by construction managers from Marriott's Architecture and Construction staff. "We are looking for a firm that knows the regulations, that is familiar with the approval processes, and that knows how to put buildings together in that region," Steiner says. They also want architects who can fill in the nuances that the kit of parts does not address. On occasion, Marriott may decide not to rely on the kit of parts at all, and in these instances a heavy bias towards early design in the proposal does make sense.

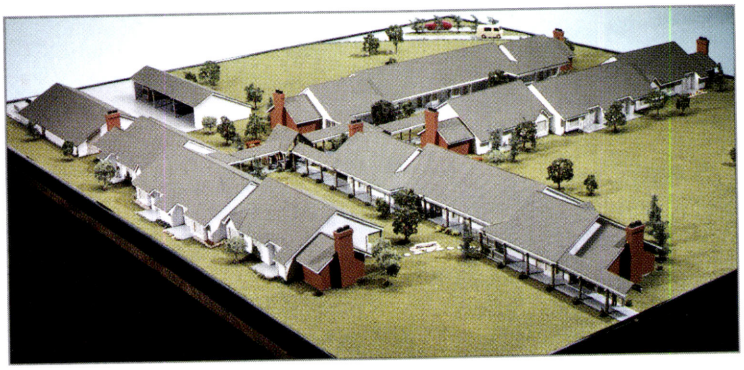
Marriott's interviews are also substantial. Typically they are half-day-long affairs, with presentations from architects and major subconsultants as well. Although in the past people from Senior Living Services attended these interviews, more recently only Design Management people are there. They expect to tour the architects' offices and to see the CAD operations (Marriott requires CAD production, and prefers AutoCAD); they also like to walk through a set of construction documents. There is some discussion of contract and fee issues, because Marriott's contracts are quite different from standard AIA format on such points as insurance requirements.

At the interviews, Steiner and his staff are looking to see if the architects will know how to work with a corporate client. Marriott is a complex organization, and the Design Management people are architects themselves. They are very participatory, and so they are looking for team players rather than team leaders. "Principals who come on very strong generally don't sell too well" Steiner says, *(Continued on page 78)*

The Kendal Corporation

"Some architects simply don't seem to hear what we're saying."

Address: P.O. Box 100, Kennett Square, Pennsylvania 19348
(215) 388-7001
Contact: Thomas C. Miller, Director for Property, Design and Construction
Number of Continuing-Care Retirement Community Projects: 4
Number of Units in Smallest Project: 200
Number of Units in Largest Project: 250
Total Number of Units: 925



© Mort Tucker

Kendal at Oberlin, Ohio. Architects: William Dorsky Associates, Cleveland.

Thomas C. Miller is the Director of Property, Design, and Construction for Kendal Management Services. Kendal is a non-profit firm, organized by members of the Society of Friends, which owns and manages continuing-care retirement communities. Their development division, according to Miller, is just starting up, and development will most likely never be the majority of their business. Since Miller, who comes from a construction management background, joined Kendal in 1986, the firm has built one project at a time. Currently three are up and running, and one is under construction; Miller thinks that number will grow eventually to twelve.

Kendal does extensive demographic studies and early marketing in each location. They also put together a board of interested community members as they begin to develop each project. This board advises them on land acquisition, marketing, and zoning issues, and frequently recommends local architects for the project. Miller also considers firms from the area of the project who have sent their material to Kendal. Every brochure they receive is catalogued; "We receive a tremendous volume," says Miller, "especially when a project gets early press." He is not impressed with photographs, but is more interested in a firm's design and working philosophy. "We are looking to assemble a design team who will be ready to work with our staff, willing to take our direction, and willing to work with the contractors," he says. A firm's client list also gets his close attention.

Miller is looking for a firm large enough to do the project, but not larger – he has found firms with between 12 and 30 architects to be ideal. Larger firms, he says, do not give Kendal the continuity he is looking for. The firms should understand the product as much as possible, but direct experience with continuing-care retirement communities is not absolutely necessary, because Kendal involves the full range of its staff and all of its combined experience on each project. Miller likes to see experience in multifamily housing, however; "Firms who are not experienced in housing, who come to us, for example, with medical experience, can become quite expensive."

Preliminary interviews help Miller narrow the field to three or four firms. These firms receive a brief scope of work, which includes the number of units, the common areas, and the square-footages that are envisioned for the project, and are asked to return a preliminary proposal that includes estimated fees for each phase of the design process.

The next step is the formal interview. The panel from Kendal typically includes one person from the corporate planning department, one financial person, and two people from Miller's Design and Construction department. At these interviews, the most important criterion is personality,"whether we think we can work with them," in Miller's words. The decision is usually made by consensus, and then Miller, who has the final say, passes the selected firm through the local advisory board.

Miller objects to architects who come in with slide projectors and proceed to use up the entire time allocated for the interview presenting their work, particularly if they dwell too much on photography or spend a lot of time on irrelevant projects. He and his colleagues can appreciate drawings and renderings of projects similar to theirs, and would rather see and discuss this work than review work the firms have done for other types of clients. But what really irks him about this kind of presentation is that the architects do not ask him and his colleagues any questions or attempt to open any sort of dialogue. "We are looking for a firm that seems to be able to anticipate our needs, that seems in tune with our business," he says, and healthy interaction at the interview is a firm's best opportunity to display its willingness to listen, to learn, and to translate Kendal's expertise into design.

Miller is especially determined to find these qualities in a firm, because his biggest complaint about architects on the job has been their inability to listen: "Some architects simply don't seem to hear what we're saying," he says. For example architects will sit down and discuss various issues with the nursing staff, but it later becomes apparent that they have not heard how the staff likes to use the common areas. Kendal strives to give its architects the benefit of the collective knowledge of its staff about what works and what doesn't work. Kendal has them meet with the food service people about the kitchens, with the maintenance people about access to the HVAC systems, and so forth. "We will of course listen to good arguments for doing things differently," he says, "but not if the architects clearly have not listened to us in the first place."

Miller would also like to see architects have a better understanding of the financial realities of his business and their relation to his projects' budgets. "Kendal's primary objective is not to get design awards, but to serve people. Our buildings have an important function: to be a comfortable place for people to live, and to provide facilities they want to use." In order to work for him, an architecture firm must convince him that Kendal's agenda, and not its own, will be its guiding force. ■

Angeles Housing Concepts, Inc.

"Some of these smaller firms are really thriving, but they have to hustle."

Address: 10301 West Pico Boulevard, Los Angeles, California 90064, (213) 284-3516
Contact: William E. Tuthill, President and Chief Executive Officer
Number of Continuing-Care Retirement Community Projects: 12
Number of Units in Smallest Project: 135
Number of Units in Largest Project: 188
Total Number of Units: 1836

William Tuthill is the President of Angeles Housing Concepts, a developer of continuing-care retirement communities and assisted-living communities. Although in the past Angeles was involved in developing projects from scratch, the firm is now primarily buying existing communities, generally ones that have run into financial difficulties, and turning them around. The company is still looking for a substantial amount of architectural services, although not of the sort they needed several years ago. Tuthill himself works with architects and construction people "probably as much as anyone in the company", because he enjoys it, he says, but also because "it's where the most important mistakes are made." His experiences with the properties Angeles has acquired has borne this out.



Angeles Corp.

Independence Village, Winston-Salem, North Carolina. Architects: Angeles Housing Concepts & Sidney L. Graham.

Although most of the projects Angeles acquires are less than five years old, there is always some renovation to be done. Some of this is strictly cosmetic, and some of it involves the reconfiguration of the project's common areas to conform more closely to what Angeles has found to work. But according to Tuthill, these renovations are most often made necessary by shortcomings in the facilities' mechanical systems. Whether the inadequacies are the result of botched construction or of skimping on the part of the previous developer, Angeles prefers to rectify them soon after it takes over. This way, the company takes the financial hit all at once; and indeed, as with a homeowner, the cost of bringing a project up to their standards is figured into the purchase price. Equally important, however, is the effect on the residents. A change of ownership, changes in staff, and renovation are best combined into a single disruption.

The kind of firm Angeles is seeking to design these renovations differs from the ones needed for new construction projects. For example, big production capabilities are not needed. Angeles is, however, looking for a firm with project experience. The kind of firm they like best is "a small firm with a couple of principals who have a great deal of relevant experience." These principals typically come from larger firms that were heavily involved in the first generation senior living communities, but were constrained to cut back as the market slowed. "Some of these smaller firms are really thriving," Tuthill says, "but they have to hustle."

If Angeles buys a project in an area where they have already built, they are most likely to go back to a firm they have worked with before. When they enter a new area, they interview local firms. Tuthill is committed to using local firms because he has found that they understand best a whole range of issues – from climatic conditions, to which architectural styles are likely to be accepted by local seniors, to nuances of life-style such as what kinds of storage people are likely to want. Local architects also know what materials are available and affordable in the area and which contractors are currently the best.

Angeles will generally interview five firms for a project in a new area. At a first meeting, Angeles brings sets of plans from their previous projects and gives the architects a week or so to study them, answering any questions they may have, and then they all talk about it at a second meeting. "We're looking to see if the architects are comfortable with us and with our needs," Tuthill says. Angeles wants to talk about the projects they see in a firm's presentation in terms of clients, budgets, and schedules. The most important thing at these meetings, he says, is how they get along, how the personalities fit together: "This is especially important with a small organization like Angeles where everyone is extremely opinionated." Tuthill and his colleagues want to get to know both the architect who would be taking the lead on their project and the supervising principal, and they want a guarantee of the continuous involvement of these two people on their project.

The Angeles people have a lot of experience with continuing-care retirement communities, and they know what they like. "We don't like to reinvent what we've been doing on every project," says Tuthill, "although we are looking for ways to do it better." For example, he says, Angeles has learned how to bury a dining room inside a building and still give it outside exposure, so they don't want to consider placing it in a wing. But he and his colleagues also know "what hasn't quite worked," and they are looking for innovative solutions, for "imagination with a commercial eye." They are looking to see evidence of this kind of talent at the interviews. "We like to get a feeling for a firm by watching the architects doodle," Tuthill says.

Tuthill also appreciates frank discussion of the project parameters Angeles has come up with. He recalls a project where the construction budget was unrealistically low because of peculiarities in the local construction industry. A number of firms they interviewed hemmed and hawed; they all said the budget was too low, but none explained why, and Tuthill was left with the uneasy impression that they all simply wanted a more expensive project. "It took us six months to find a firm who sat us down and clued us in about the harsh and *(Continued on page 78)*

Integrated Health Services, Inc.

"One of the doctors insisted on stopping the meeting then and there."

Address: 11011 McCormick Road, Hunt Valley, Maryland 21031
(301) 584-7050
Contact: George E. Vonderheide, Senior Vice President
Number of Continuing-Care Retirement Community Projects: 4
Number of Units in Smallest Project: 100
Number of Units in Largest Project: 350
Total Number of Units: 725



Architects

Laurel View Comprehensive Care Center, Greensburg, Pennsylvania. Architects: Indovina Associates, Pittsburgh.

Integrated Health Services, Inc., is a public company that manages, owns, and leases continuing-care retirement communities as part of a mix that also includes assisted-living, subacute-care, and nursing home units. Their projects most often include all four types of units in a campus setting. George Vonderheide, Integrated's Senior Vice President of Design and Construction, is responsible for finding, hiring, and supervising architects for his company's renovation and new construction projects.

Vonderheide is an architect himself, and his job on any individual renovation project begins before the selection of an architect. He surveys a facility his company is considering taking over and then makes a recommendation to the board of directors. In those cases where Integrated does acquire the property, he usually hires a local architect to do the renovation: "We like to put our own stamp on a project," he says. Vonderheide does the programming for both new construction and renovation projects mostly in-house, and then he and the architects work closely together through schematic design, in consultation with the facility's administrator. The architects take the lead in the construction documentation phase.

Vonderheide is a member of the AIA's Architecture for Health Committee, and whenever he begins to work in new territory, he starts his search for architects with the committee's list. First he interviews firms to see how familiar they are with both local authorities and the state health authorities. He is looking for principals who know health officials at the state level personally, and who have extensive experience working with these officials, because they are "very helpful" in getting the necessary approvals with a minimum of fuss and trial-and-error. If he knows these officials himself, he may also consult with them to see which architects they respect. Another resource is nearby architects he has worked with .

Vonderheide looks for firms with experience in both architecture and interior design. Interior design is, of course, an important marketing issue. The units and public spaces of a retirement community must appeal to the potential residents, whereas nursing or assisted-living units are frequently designed to appeal to their children. A comfortable, traditionally residential feel is the goal. But to achieve this goal, the firms must have broad knowledge of materials and the regulations that apply to them, because although retirement communities must look very different from nursing homes, they are generally subject to the same stringent codes. "They can't, for example, specify ordinary residential carpeting," he says. The residential quality must be created with materials that meet fire retardancy and other such safety concerns.

For renovation projects as well as new construction, Vonderheide gives a scope of services to three or four firms and asks them to submit a proposal. While he discusses with each firm what percentage of construction they would generally charge for this type of project, in the proposal he asks them to submit not a fee but a budget for fees – what each firm proposes to spend on each phase of the project.

These budgets help Vonderheide see which firms best understand the nature of the assignment and the working relationship he wants to achieve. He stresses, however, that this budget is the third of his three criteria for selecting a firm, his first criterion being integrity and his second the firm's experience in and understanding of his industry. For the actual contract, Vonderheide likes a fee structure of time and materials up to a cap for each phase, with any unbilled monies moved into the budget of the next phase. For the working drawings, he feels the project is defined enough that the firm should be able to give him a fixed fee. He tends to prefer smaller firms, because he has found that the increased overhead of larger firms tends to make their budgets "unruly."

Vonderheide complains about architects who try to put one over on him in the fee negotiation process – which he estimates at about 10 percent of those he talks with. He examines closely line items such as computer time or mark-up on engineers' fees. He is careful, when he sees a formula like "2.5 x payroll," to ask the firm's definition of payroll; some firms have answered that payroll is salary plus benefits, in which case he feels they are trying to bill twice for the same costs. Even some fairly standard rates may disregard the financial realities of his projects: "If I see principals billing their time at $150 an hour, I will ask them to stay out of the project until the end." He often does not identify himself as an architect at the outset; when he does, he says, "there are no more games."

Formal interviews, with a selection committee from the facility, are set up with the firms Vonderheide is satisfied with. Here the architecture firms must convince this larger group that they understand the project's parameters and that they will be responsive to the concerns of the administrators and health professionals on the committee.

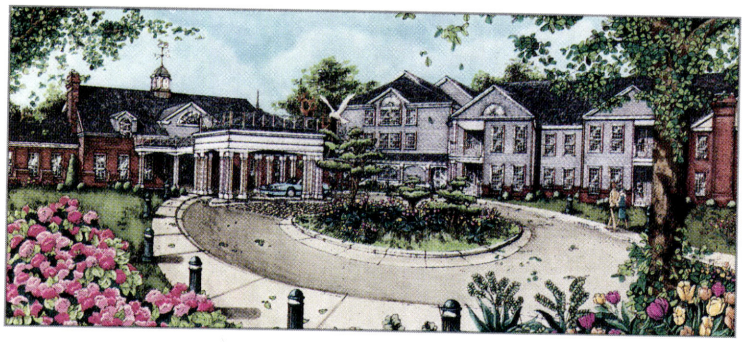
At this juncture Vonderheide has witnessed one of the most serious mistakes an architecture firm can make. On two occasions, two different firms claimed the same project as their own in the course of a series

(Continued on page 78)

Greystone Communities, Inc.

"We don't work that way – but we don't think the architects will make less money working our way."

Address: 222 West Las Colinas Boulevard, Suite 2100, Irving, Texas, 75039
(214) 402-3700.
Contact: Kimball S. Watson, Senior Vice President
Number of Continuing-Care Retirement Community Projects: 25
Number of Units in Smallest Project: 97
Number of Units in Largest Project: 380
Total Number of Units: 3000



Oakbrook Common, Dearborn, Michigan. Architects: Shephard Legan.

Greystone Communities, Inc., works as consultants to owners, generally hospitals, who are building senior living communities. The company performs feasibility studies and creates business plans for the sponsors; they serve as developers, supervise financing, market the project, and generally provide expertise in this business to the sponsors. Greystone, like a developer, takes direct responsibility for the architects and contractors, although all contracts remain with the owners. Thus Greystone helps the owners find appropriate architects to talk to, guides them through the selection process, and works closely with the architects as the client's representative.

According to Kimball S. Watson, Senior Vice President, Greystone prepares a comprehensive Request for Proposal which describes the project, giving the prototypical planning that results from their marketing analysis of the project. This RFP goes out to a small group of architecture firms. Greystone keeps a current list of architecture firms they know can do this kind of work, adding and deleting some every year, and they recommend several of these firms to each sponsor. Greystone keeps on file all of the résumés they receive from architecture firms. Normally architects approach them, but they will look up the architects of projects that impress them, and they respect word-of-mouth recommendations. While they have developed ongoing relationships with a few firms, they like to work with new firms because, as their prototypes evolve, all their subsequent projects can benefit from fresh thinking.

Also frequently on the list for the RFPs are other firms – usually local – that have successfully worked with the sponsor on different types of projects. Greystone has cooperated successfully with a local firm in joint venture partnership with a firm that is experienced in the field, and they are happy to make the introductions. In such a case, the local firm generally has had experience with multifamily housing projects, and is responsible for code research, contact with local officials, and working drawings.

The proposal is a crucial element of the selection process, not a formality. This is particularly true of the fee portion of the proposal. Firms must understand the nature of the product, stresses Watson, and there is no "ego-room" to permit an architecture firm to ask for a higher fee for its name. Greystone's extensive experience with these projects allows them to come to the project with a detailed program, prototype units, and that important body of knowledge Watson calls "what we should never do again." This done, Greystone will work closely with the architects to refine the design and tailor it to the specific site. In other words, Greystone is not asking the architects on each of its projects to design new units. They want the architects to improve on the units and to package them in attractive buildings. The RFP makes this clear, but some architects still base their fee proposals on a redundant scope of work. Because Greystone wants to work with a firm that will take their input seriously, this mistake can be fatal: "Anyone who asks in the proposal for 6 or 7 percent [of construction costs] is automatically excluded," says Watson. "We don't work that way – but we don't think the architects will make less money working our way." Their way is a lump-sum fee for each phase of the design: schematic design, design development, working drawings, a small amount for helping in the bidding process, and construction administration.

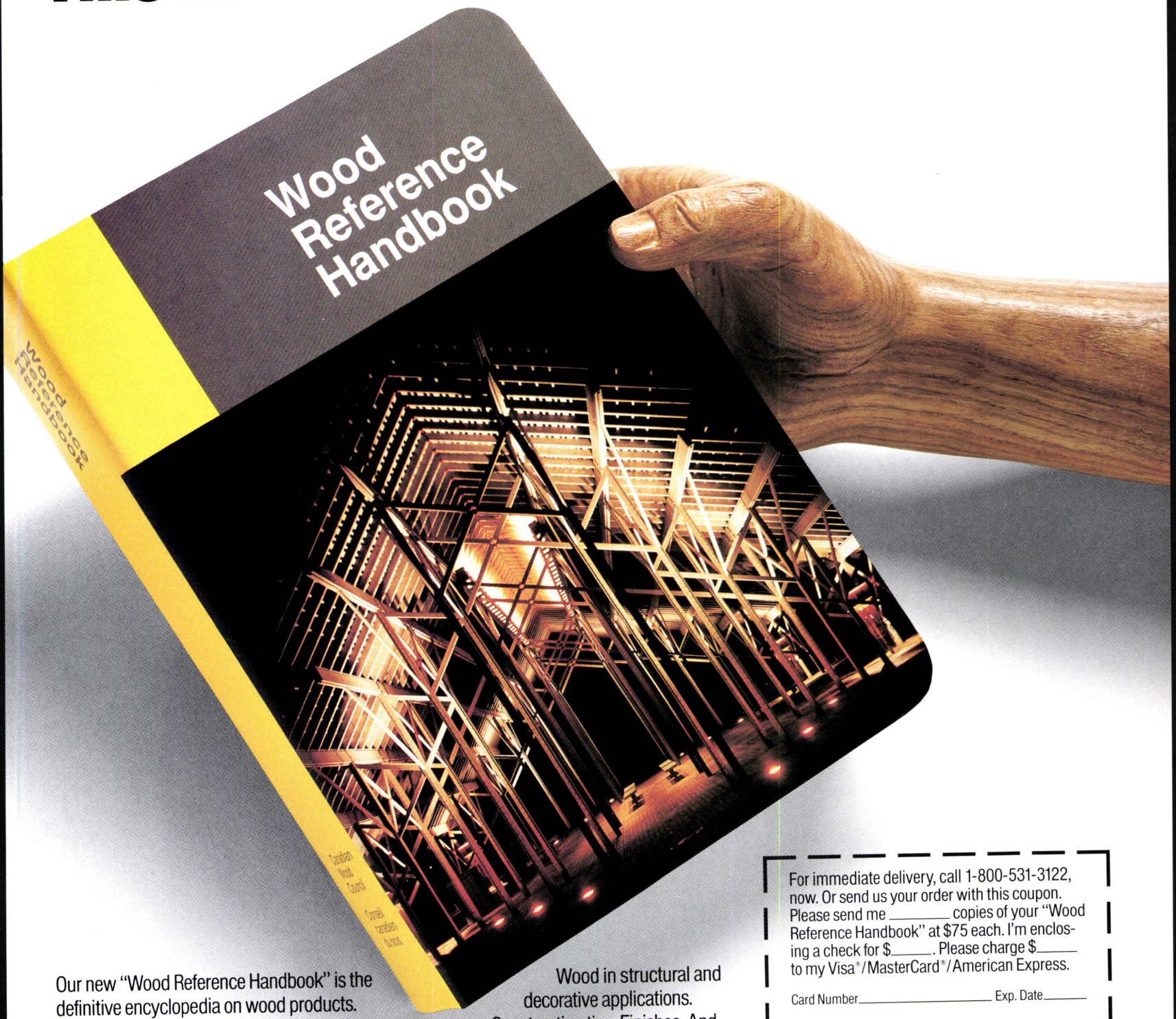
Interviews generally follow the proposals. Greystone sets up a series of interviews between the competing firms and members of the sponsoring organization. The interview panel will include one person from Greystone and two to five people from the sponsor, or in some cases the entire board of directors. Greystone has prepared a matrix and helps the group score the firms arithmetically, but, Watson admits, "it's still a very subjective game." Although the the final decision is the hospital's, Greystone's recommendation is usually the most important factor.

The interviews offer the architecture firms another opportunity to display their understanding of all the issues affecting the design of a particular retirement community – or their misunderstanding. For example, architects can hurt themselves in the interview simply by using the wrong terminology. If the architects refer to the project as an "institution" rather than a "community," or if they keep talking about "beds" rather than "units" or "apartments," the people across the table are likely to decide that that firm has the wrong attitude for this type of project. To avoid pitfalls of this sort, architects should educate themselves by asking questions of their contact at the client organization before responding to an RFP or appearing at an interview.

Architects must also keep an eye on the goal of winning the commission at the interview. An interview is a complex social interaction, and the architects who present must be careful to give the clients the information they need. Watson tells of a firm that, instead of presenting their capabilities, spent their time listing difficulties they foresaw with the site and the schedule as given in the RFP. Aside from the obvious gaffe of challenging decisions the client has already made, their presentation struck the audience as odd. "I assume they were trying to show off

(Continued on page 78)

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Marriott *(Continued from page 72)*

"especially if we don't hear anything from the project architect and the project manager. These are the people we want to hear from; we're not interested in a firm's marketing abilities."

One complaint Steiner has about architects' performance on the job is their tendency to delay telling him if they are losing money on his project. "Often our first clue is that the level of service goes down," he says. "At that point, if the architects have gone down the road and lost a lot of money, we start to ask if we really asked them to do all that work." Marriott policy on fees is somewhat unusual: For each phase of the project they pay a lump sum, which includes all reimbursable expenses. "We spell out in the contract exactly how many trips we want the architects to take, and how many sets of prints we want," Steiner says, "and we think we are generally fair in our fees and additional services payments." He would appreciate more forthcoming communication so that the architects do not lose track of the services and the fees agreed to at the outset. "If someone has lost a ton of money, more than likely we'll both be unhappy," he says, "because we will not have gotten the service we want."

Steiner concludes, "It's a tough time out there for everybody, and I understand that many firms are trying to expand their client base." Marriott, he says, will look at any firm, but they have a group of firms they like and these firms are most likely to get the projects. Still, he does not discourage firms who would like to work for Marriott from trying: "There are and will be opportunities for new firms to be woven into our network of consultants." ■

Angeles *(Continued from page 74)*

expensive realities of that location," Tuthill remembers. That firm ended up with a commission from Angeles – in another community nearby. Angeles generally asks two or three firms to submit proposals that address both fee issues and the team of subconsultants the architects recommend. "The architects should take the lead on fees, tell us what consultants we ought to hire – giving us alternatives of course – and they should lead the team throughout the project," Tuthill says. "We would rather pay for expertise than have to supervise." Even so, Angeles likes to contract directly with the subconsultants; Tuthill recognizes that "most architecture firms aren't financed to front for their subconsultants."

One of the problems that keeps coming up on the job, says Tuthill, is errors on the drawings. "When something goes wrong, you find out who you've got working for you," he says. He wants to work with architects who will fess up and not try to shift responsibility, a mistake which he attributes to some firms' tendency to put a job behind them after the drawings are complete. "The really capable architect," he feels, "has a proprietary interest in getting the project built right, and will provide careful drawings that are not open to interpretation, with accompanying notes to the contractor spelling out any crucial sequencing issues, warning of any long lead-time items, and calling out the most crucial dimensions." Such an architect, he believes, can win the respect of the contractors, and inspire in them some pride in the project, overcoming their generally confrontational attitude towards designers – and this, he thinks, is an invaluable service. ■

Integrated *(Continued from page 75)*

of interviews. In one case, the selection committee saw a local project, which they were all familiar with, first in one firm's slide presentation and then again in another's that same morning. They were appalled. While it is a common, and generally accepted, practice among architects to show photographs of projects which were done by other firms, on which significant work was done by senior individuals who have lately joined their firm – and this is especially common when a firm's principals are trying to assemble a strong team to help them break into a new field in which they themselves have not had experience – credit must be clearly stated. Sloppiness on this issue can, understandably, preclude further consideration. "My inclination when the project came up the second time was to let them continue with their presentation and get to the bottom of it later, less confrontationally," says Vonderheide. "But one of the doctors insisted on stopping the meeting then and there, and the partners of the firm had to admit they had not worked on the project."

Vonderheide is equally frank about other problems he has experienced with architects. For one thing, he finds that a lot of architects are "lacking in the discipline of 'the client is always right" – a problem he blames on architecture schools. Mr. Vonderheide has asked the principals of firms he has hired to replace the project manager on his project if he feels this architect is unwilling to take his direction or to respect his experience. "Architects who want it their way or nothing," he says, "will end up with nothing."

But Vonderheide's biggest gripe comes long after the architects have been working on the project: coordination between the architects and the engineers on the construction documents. "Contractors will bid a project by seeing how many change orders they can foresee; that's how they make their money," he says. There is generally poor coordination now, and he would like to see architects take the lead in improving it. "I would much rather have an architect tell me my deadline for drawings is unreasonable and ask for another couple of days than have cost overruns during construction caused by errors in the drawings." At the initial interviews, Vonderheide always asks who in the office does this coordination. "If they look at each other and say, 'Sure, we could do that,' I start to think in the back of my mind, 'maybe these guys are just designers.'" If more architects would really concentrate on quality control of their drawings, as well as on more conceptual design issues, he believes, it would increase their credibility immensely and make for "much happier clients." ■

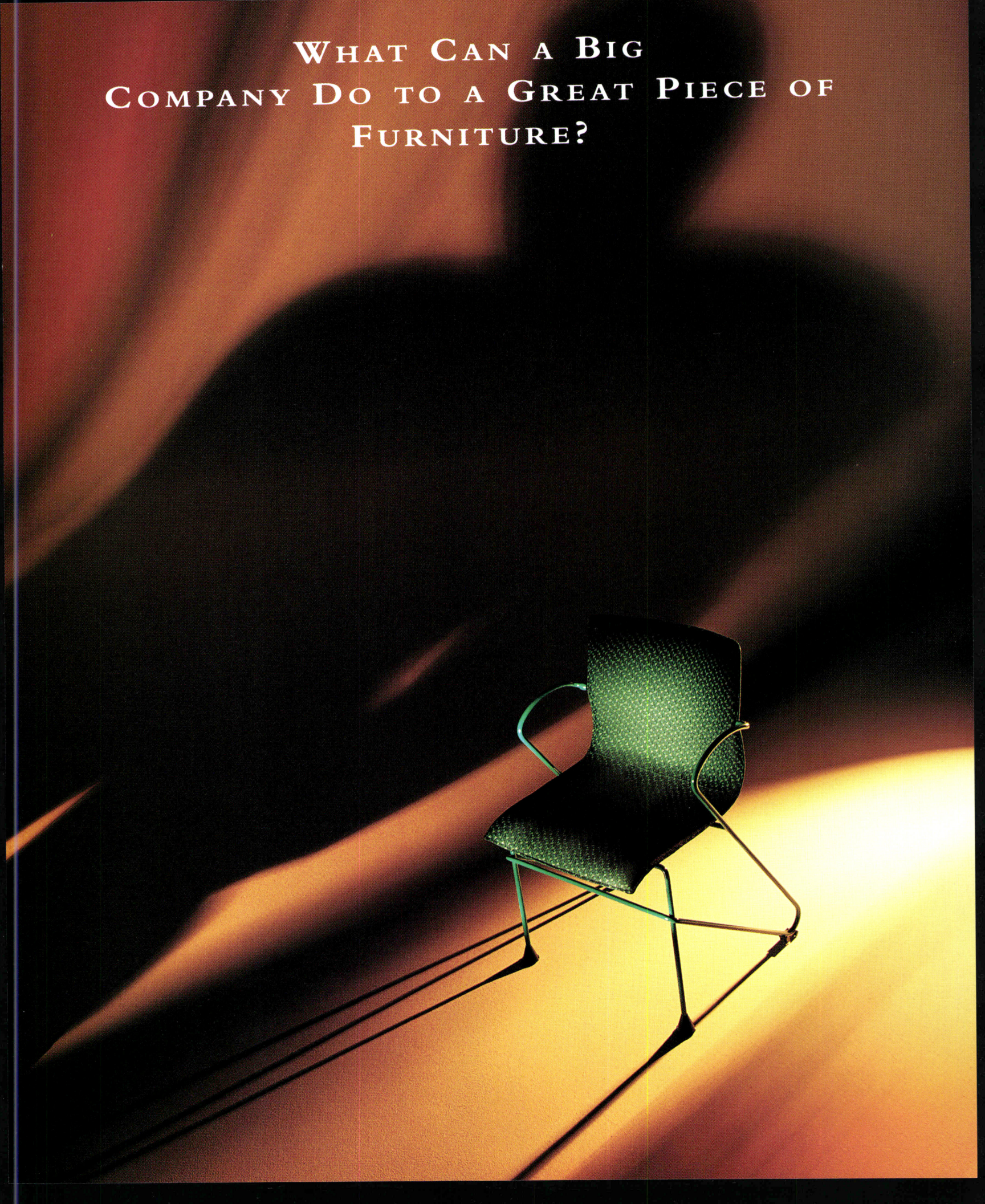
Greystone *(Continued from page 76)*

their knowledge," says Watson, "but what we really wanted to hear from them was why they would be the best firm to work on this project."

Greystone usually hires an interior design firm separate from the architecture firm. Watson cites two reasons for this preference. First, interior design is very important to the success of a retirement community, and Greystone wants the interior designers to be the architects' equals on the project. "We feel that architects have a tendency to override interior design departments of their own firms," he says. Second, he has found that "most architects are not traditionalists at heart," and that interior designers are better able to create interiors that are comfortable for the elderly. Watson recalled a project where a better use of space and improved lighting and views led them to build an angled wall in some of the units. It didn't work well, he said, because it made the prospective residents uncomfortable: "We've never lived with an angled wall before," they said.

And that is the trick of designing a continuing-care retirement community: to build, within the financial constraints of the project, attractive new residences for older people. "The decision to move into one of these communities is not an easy one for most elderly citizens," Watson points out, "and both the exterior and the interior appearance of the project are critical to its success." Even in the context of the full range of services these projects offer their residents, not to mention the attendant medical facilities, they must provide the elderly with a place they can proudly call home. ■

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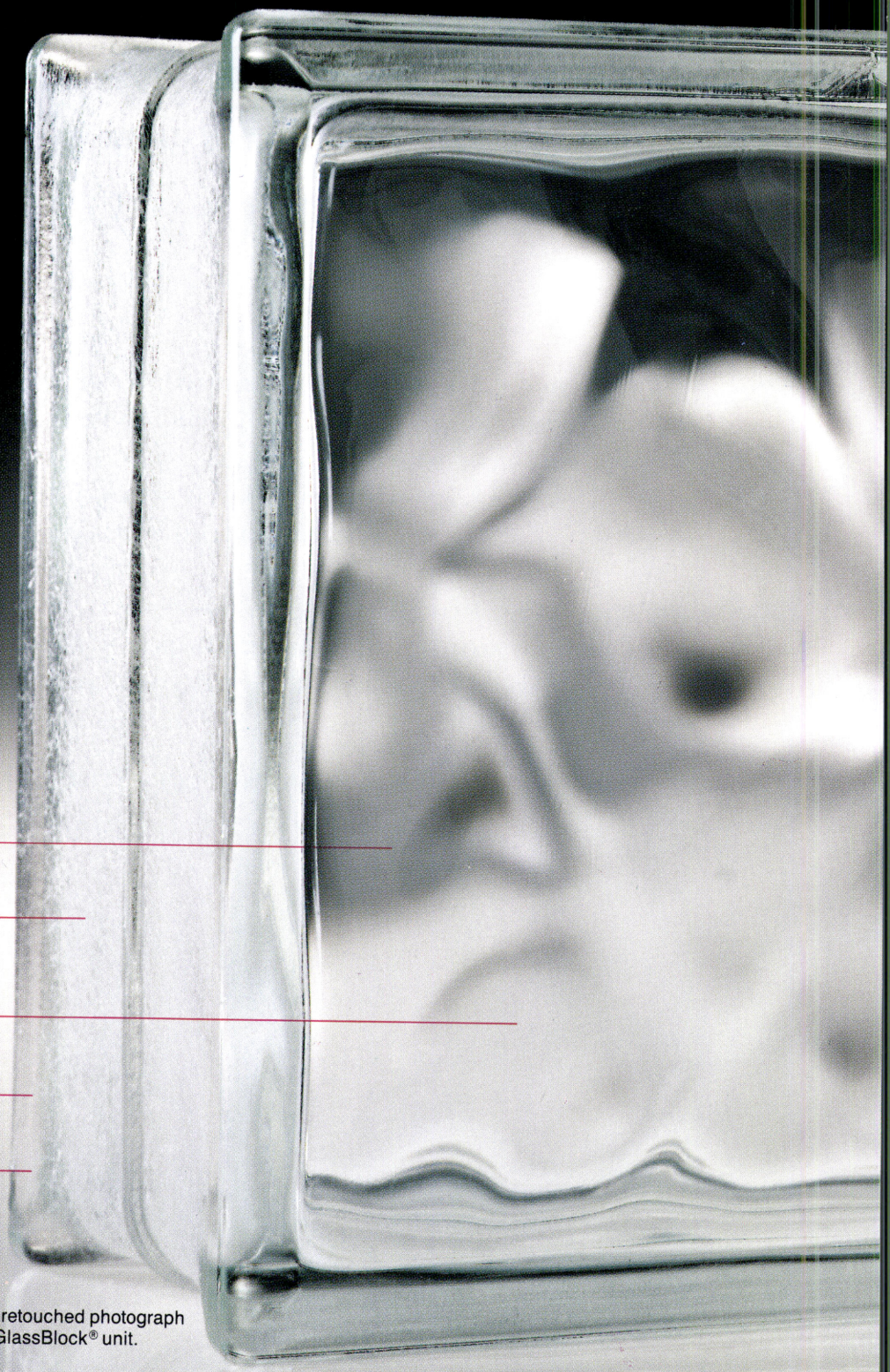
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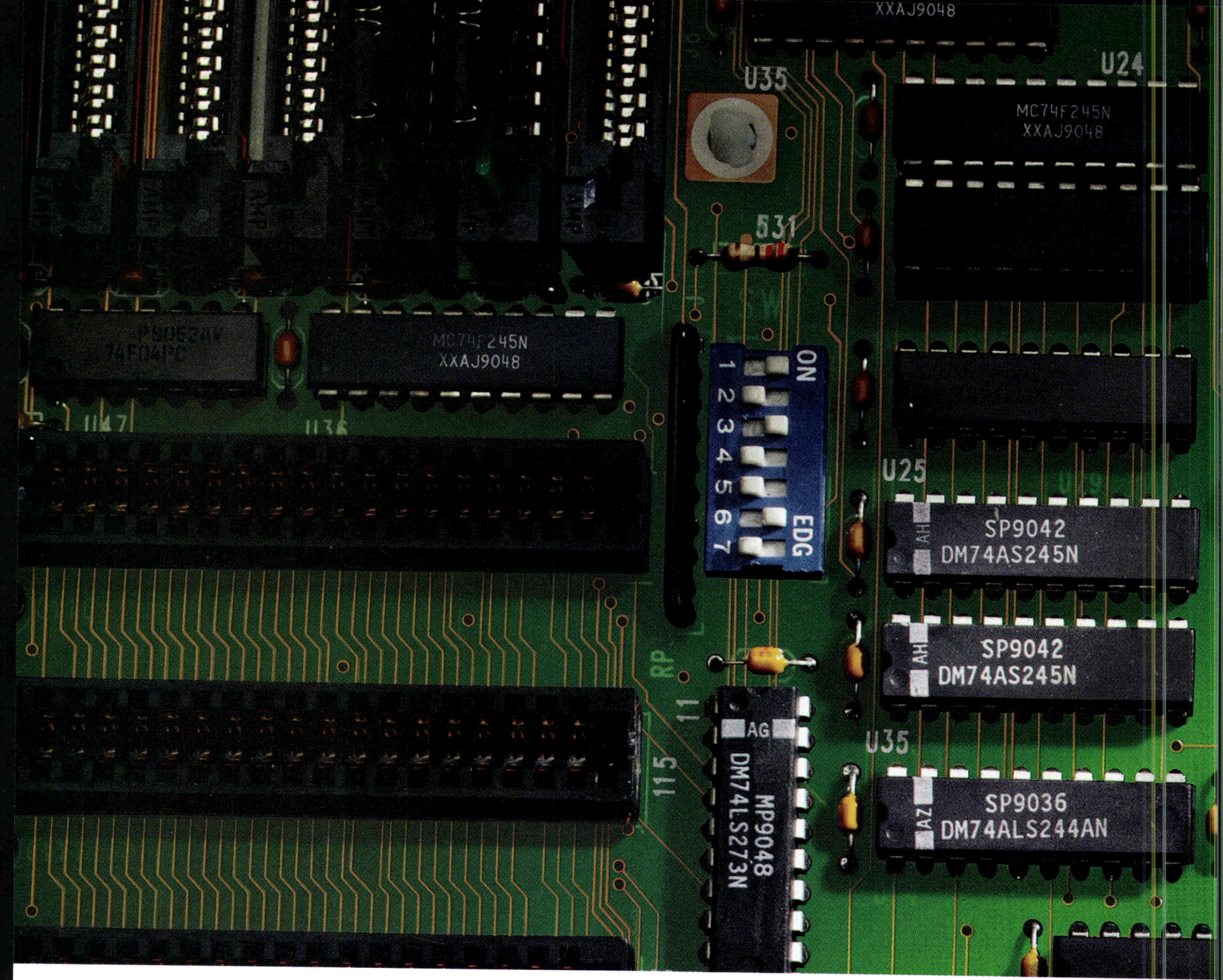
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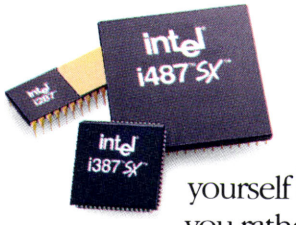
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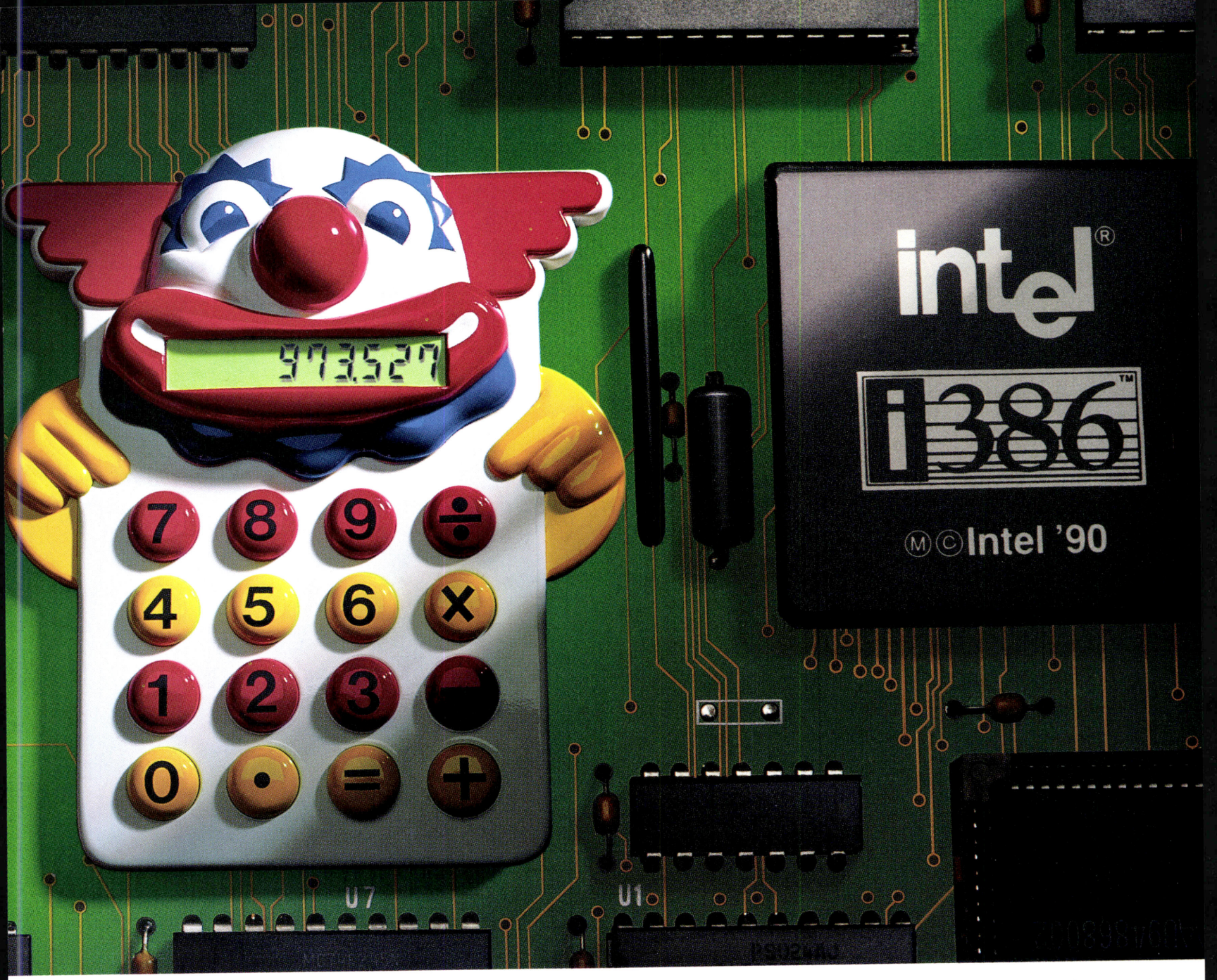


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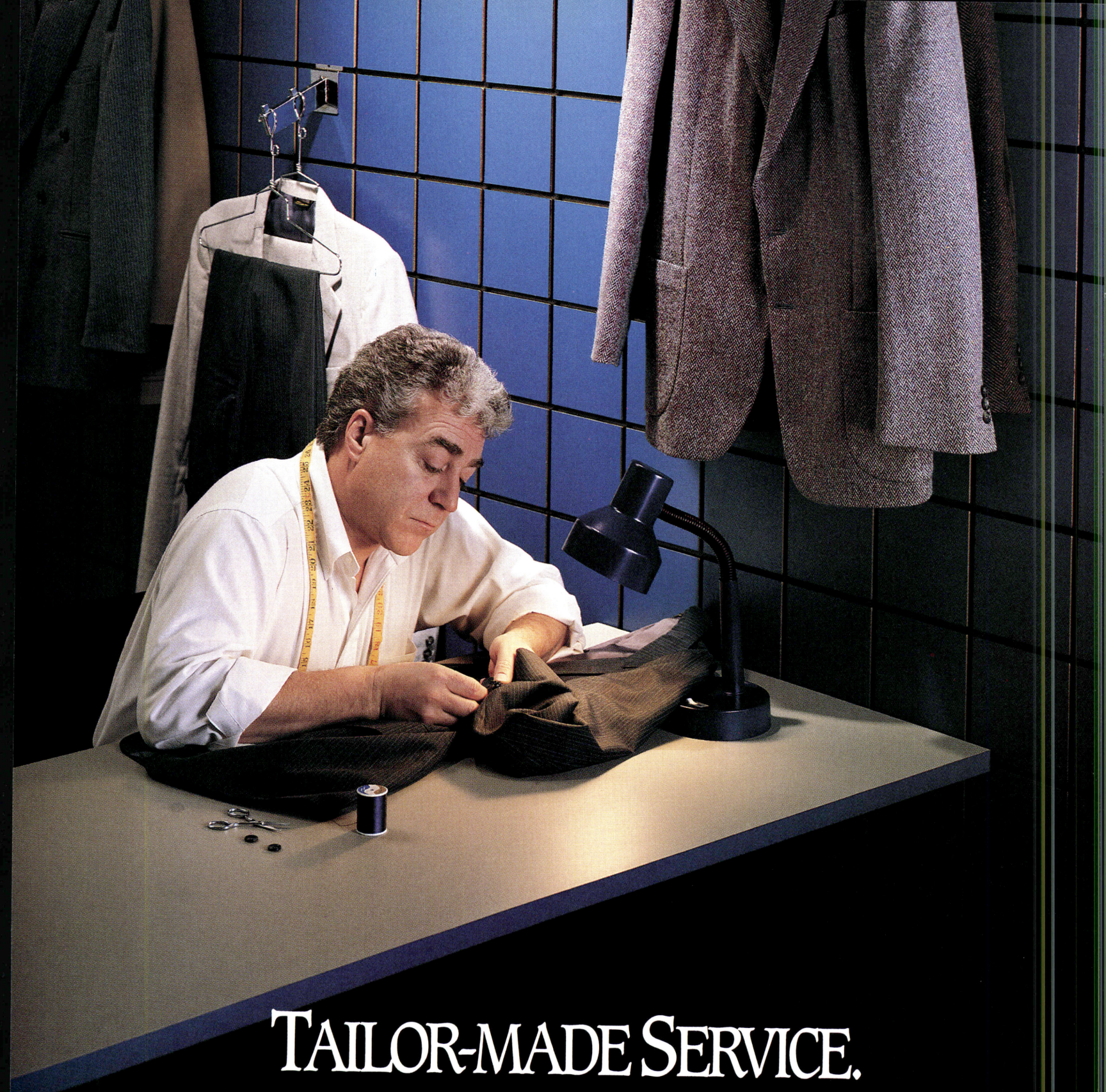
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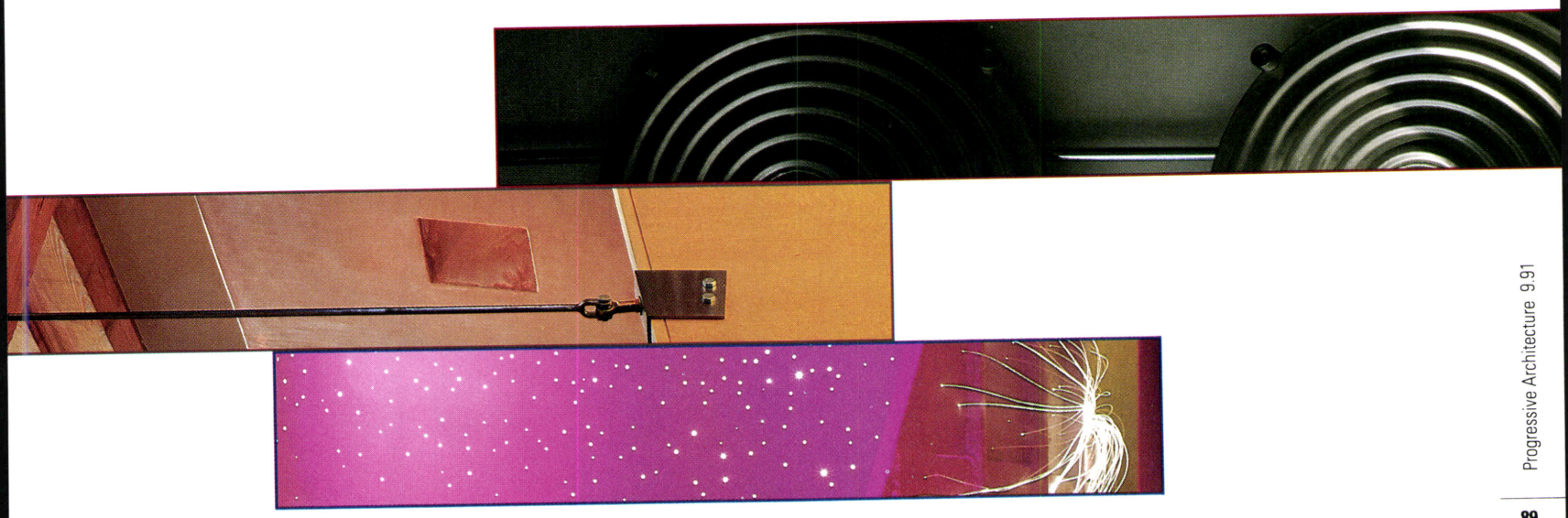
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Design
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Projects 142

Interior Design



In the following pages, eleven works uncover promising contemporary departures.

These days every architect must chart a course between invention and received knowledge – navigating, with each new project, between shifting design currents and the safety of the mainstream.

Often, the most rewarding design is that which steers clear of such ideological and stylistic extremes in favor of the ambiguous territory between, where meaningful innovation has more to do with casting light on unexpected facets of familiar experience.

As with the interiors featured in this issue, designs we choose to publish need not be perfectly proper, nor wholly original, but in modest measure revelatory, risk-taking, mistake-making, to the enlightenment of us all. **Ziva Freiman** ■

Night and Day

Torres de Avila, Barcelona

Two interiors in Barcelona represent the climax of a recent tradition and, perhaps, the beginning of a new one.

As the city of Barcelona prepares for worldwide attention next summer with the 1992 Olympic games, it is a peculiar time to be speculating on the health of the city's hyperdesigned nightlife. But just such speculation has been cropping up in the local press recently, suggestions that the sun may be setting on *la noche diseñada* (the designed night), the 1980s phenomenon that produced flamboyant bars and restaurants by Alfredo Arribas (including Velvet – P/A, Sep. 1989, p. 120), Pepe Cortés, and others. The announcement of this year's FAD prizes, the city's most prominent architecture and interior design awards, fueled such talk, since the jury chose not to honor an interiors project – in spite of the highly visible and widely published Torres de Avila bar by Alfredo Arribas and Javier Mariscal.

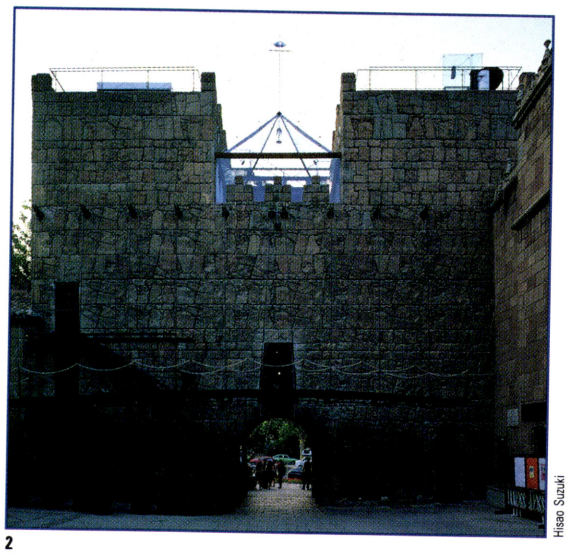
The two projects featured here, Torres de Avila and the Tragaluz restaurant by Pepe Cortés (which, incidentally, was chosen as the best interior in the FAD's public opinion poll) may seem to be exemplars of *la noche diseñada*: Both rely on rich use of materials, chic furnishings, and crowd-pleasing kinetic features, and both bear the mark of the artist Mariscal, whose playful designs are now ubiquitous in Barcelona. But a more subtle reading could lead one to the conclusion that Torres de Avila is a kind of grand finale for the no-holds-barred design of the 1980s, while Tragaluz is a harbinger of a new architectonic restraint, relying more on a single, clear architectural gesture – its skylighted roof – than on the all-but-the-kitchen-sink design approach.

Part of the difference may have to do with the projects' respective functions. While Tragaluz – at least the main dining room under the skylight – is designed for quiet dining, Torres de Avila is a destination almost solely by virtue of its design. There is no dining, or even dancing; patrons simply listen to the piped-in American pop music (and strain to talk over it), drink, and look at the building and at other people. In *la noche diseñada*, the building and the entertainment are one. Such a phenomenon indicates not only the extent of the Catalan appetite for design, but also the skill of the designers who pull it off.

Mark Alden Branch ■



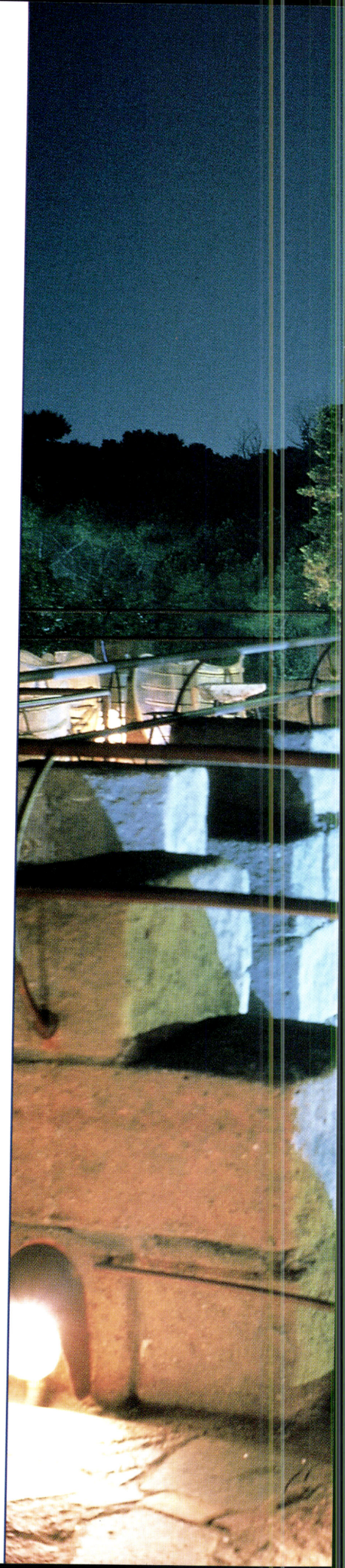
1



2

Hisao Suzuki

Torres de Avila is the gateway building (1) of Poble Español, a mock Spanish village built for the 1929 Exposition. The entry sequence on the inside façade incorporates stairs and a gangplank-like ramp (2). On the roof, the bar's themes of duality and opposition are expressed in lanterns topped by the moon (3) and the sun.



3



Torres De Avila

Alfredo Arribas

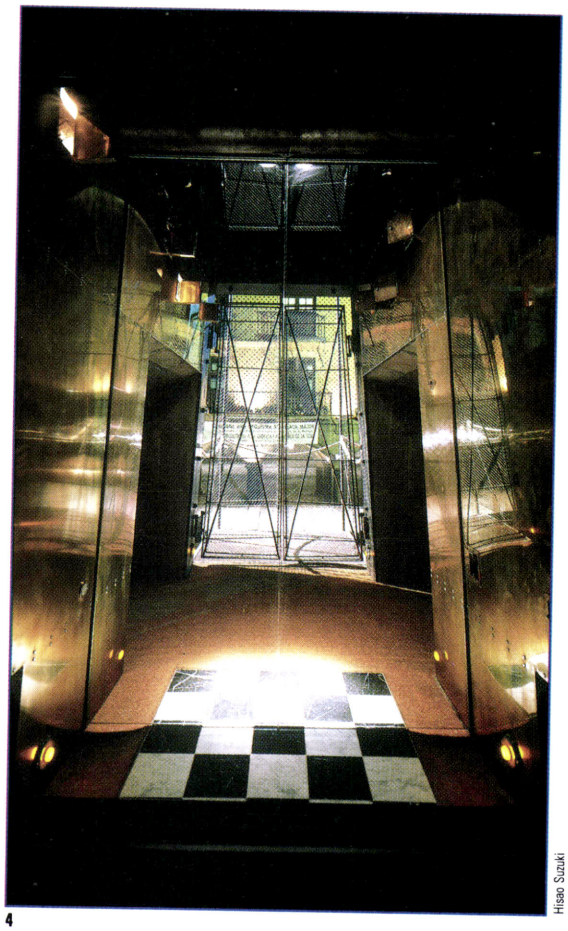
and Javier Mariscal

The Torres de Avila (Avila Towers) form the entrance to Poble Español, a kind of proto-Disneyland developed for Barcelona's 1929 World Exposition. Built of concrete formed to look like stone, the towers were empty, roofless, and unconnected when architect Alfredo Arribas and artist Javier Mariscal were asked to convert them to a bar.

The designers exploited the duality of the existing structure by assigning opposite themes to each tower: "night-day, moon-sun, feminine-masculine, emptiness-fullness."

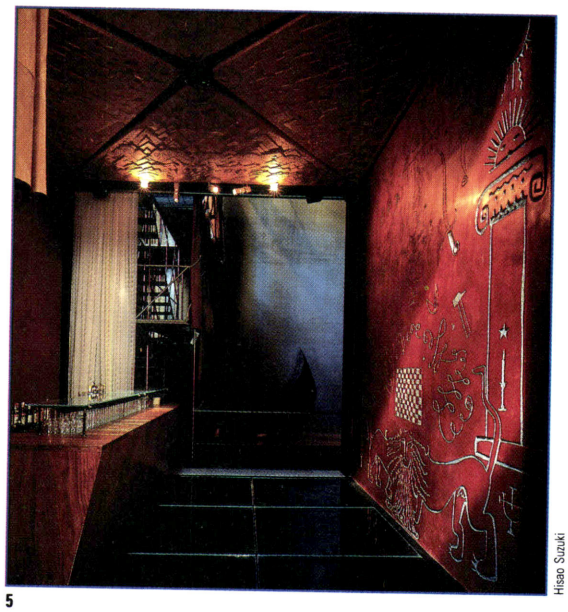
They connected the structures with new construction at three levels, between the towers and above the existing archway. The place of this central portion in the project's iconography is as the 'eye of God,' and images of eyes are found throughout.

The eye-related iconography may also have to do with the persistent theme of revelation in these bars: Arribas and Mariscal have provided remarkably diverse ways of watching people, covertly or openly. The great cone-like structure in the 'moon' bar revolves slowly during the evening, alternately hiding or revealing the patrons sitting within it. The elevator is glass, so passengers can glimpse and be glimpsed during their ride. And in the raciest embodiment of this theme, the restrooms (or at least the most public portions) are visible through holes in the floors of both the major spaces. The effect of all this variation is that even after one has seen Torres de Avila once from top to bottom, a second visit will always yield another new experience.



Hisao Suzuki

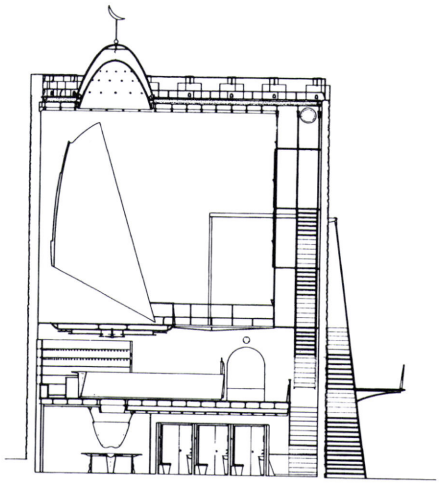
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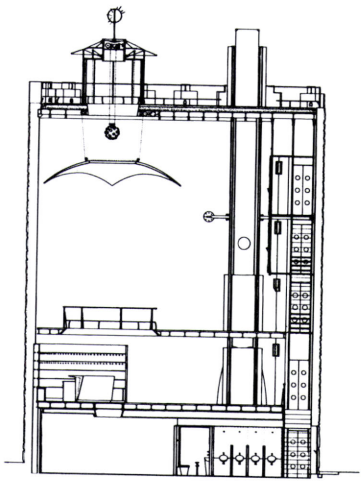
Hisao Suzuki

5

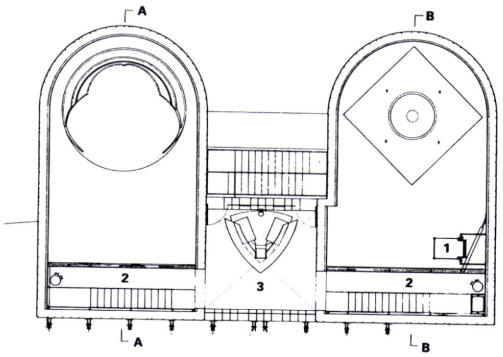
Patrons enter the building through electronically parting doors (4). One of the new spaces connecting the two towers (5) includes a mural by Javier Mariscal. A detached "floating" vault is the main feature of the "sun" tower (6, 7). A hole in the floor of the bar – echoing the hole in the vault – reveals the round billiard table of the men's restroom below (8, 9).



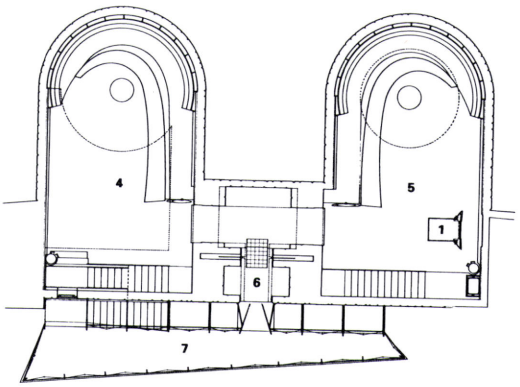
SECTION A-A



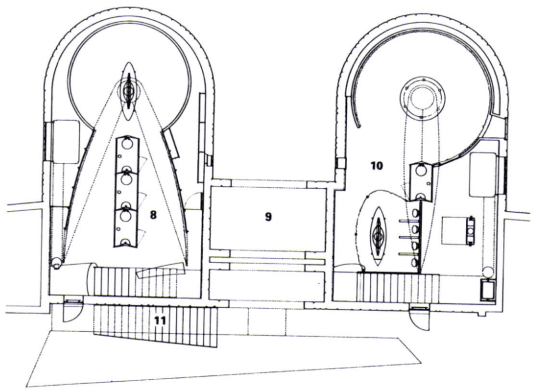
SECTION B-B



FOURTH FLOOR PLAN



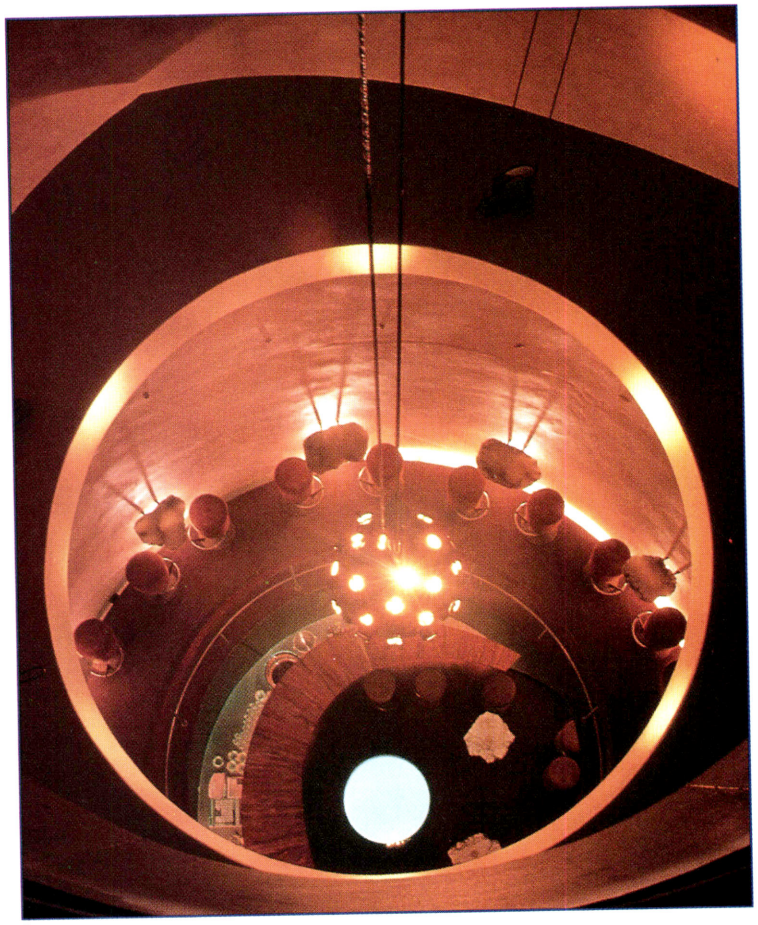
SECOND FLOOR PLAN



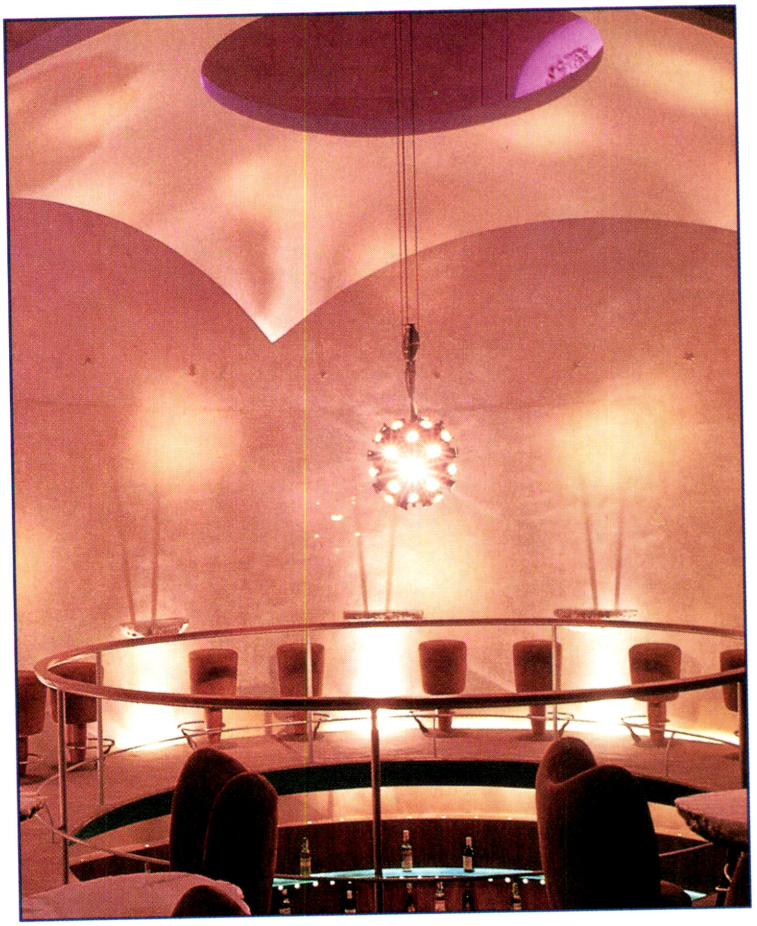
FIRST FLOOR PLAN

1 ELEVATOR
2 BALCONY
3 BAR
4 "MOON" BAR
5 "SUN" BAR
6 ENTRANCE
7 RAMP
8 WOMEN'S RESTROOM
9 ENTRY ARCH
10 MEN'S RESTROOM
11 STAIRS TO ENTRY

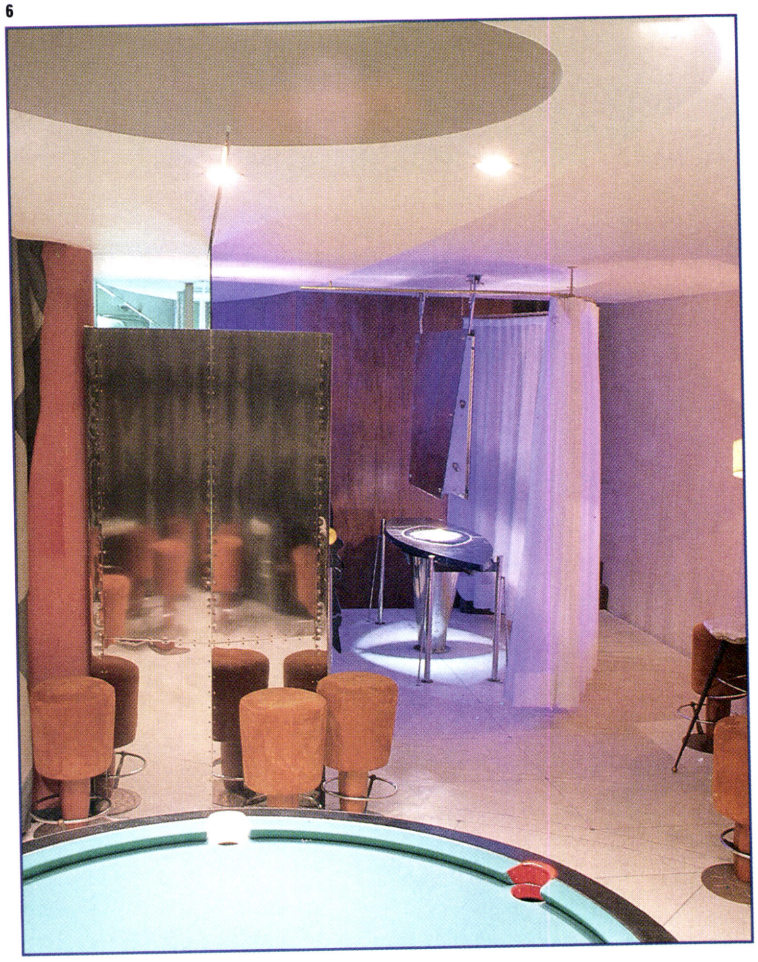
N ↗ 20'/6m



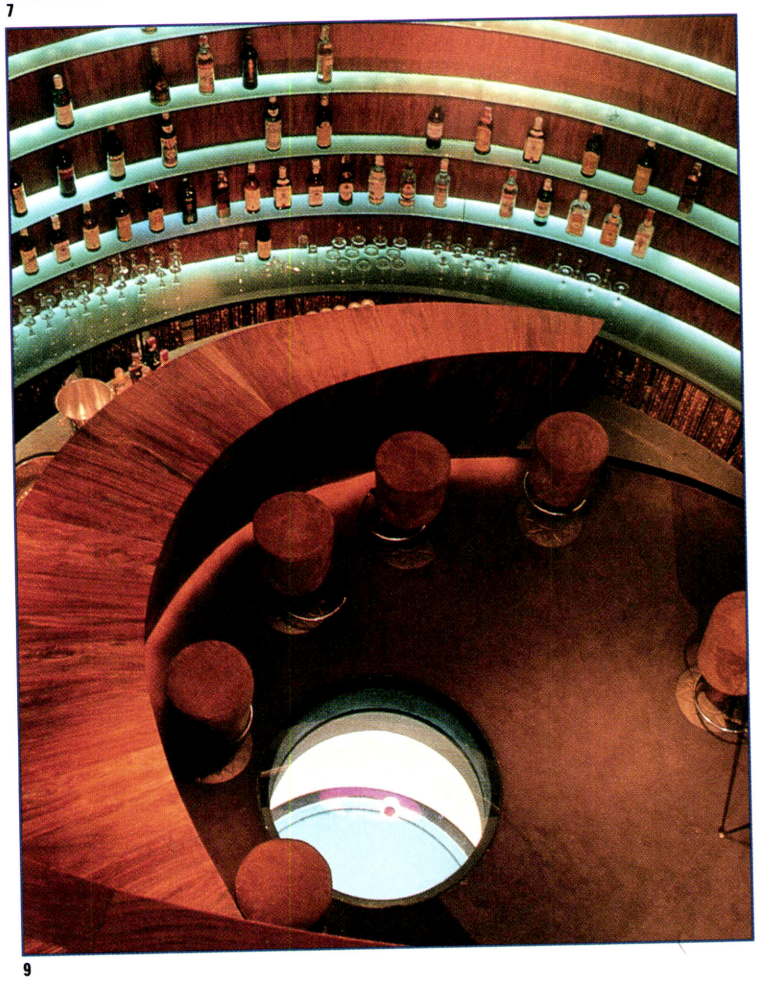
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7

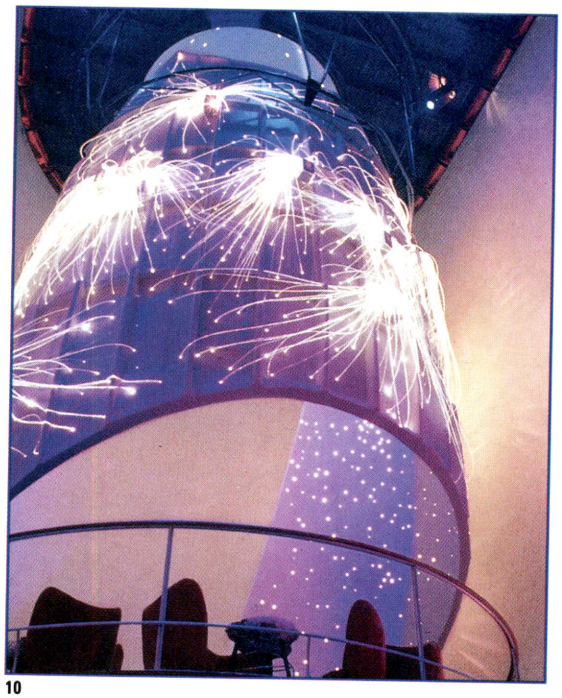


8



9

The "moon" tower is dominated by a revolving enclosure (12, 13) that changes color – from blue to red – throughout the evening (using color floodlights on an off-white surface). The starry lights on the inside of the piece are fed by fiber optic cables, which are revealed on the outer surface (10). Directly below, and visible through a window in the floor, is the sink of the women's restroom (11).



10



Hisao Suzuki

11

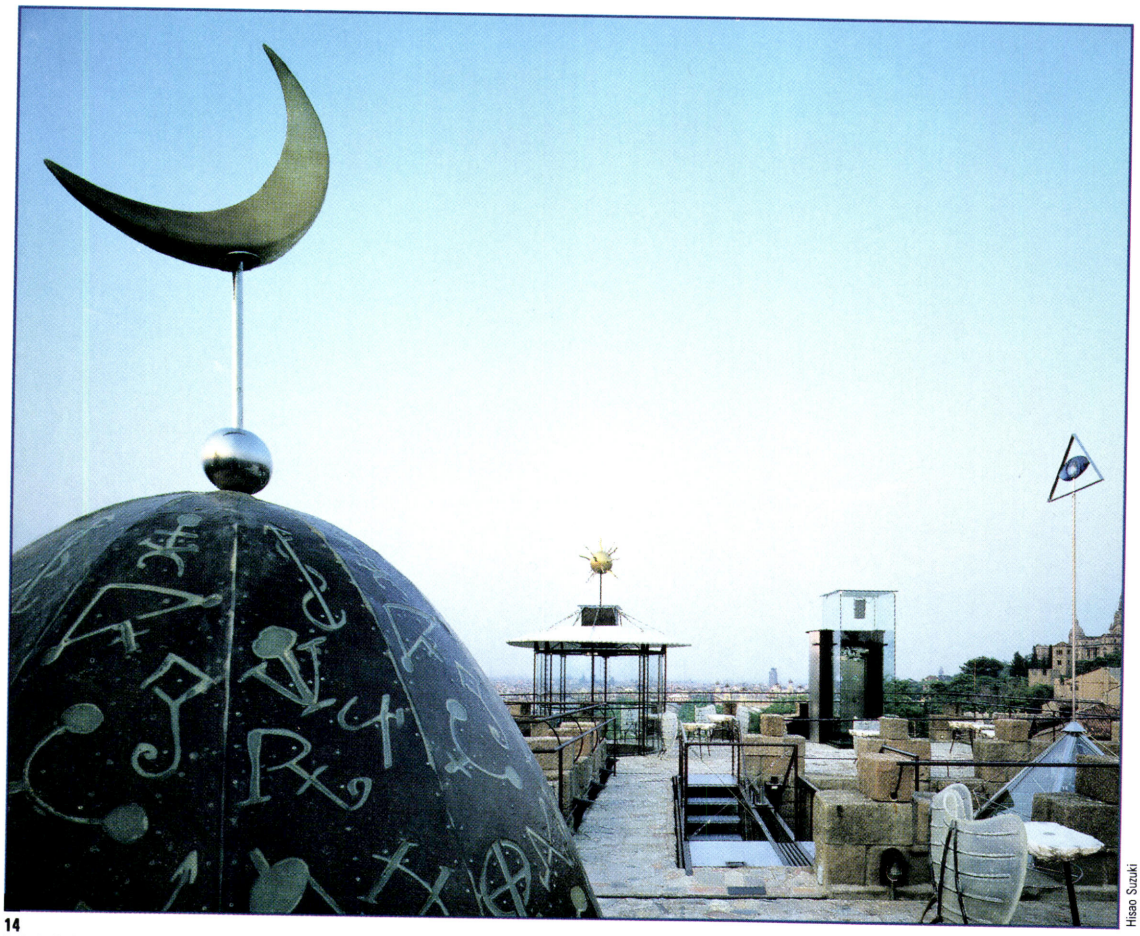


12

Hisao Suzuki

13





Hisao Suzuki

14

Project: *Torres de Avila, Barcelona.*
Architects and designer: *Alfredo Arribas Arquitectos Associados, Barcelona (Alfredo Arribas, Miguel Morte); Javier Mariscal, Barcelona.*
Client: *Torres de Avila, SA, Barcelona (Josep Nogue).*
Site: *Poble Español, a collection of replicas of traditional Spanish architecture built on Montjuic Hill for the 1929 Universal Exposition.*
Program: *5000-square-foot nightclub in an existing concrete replica of the towers of the Spanish city of Avila.*
Structural system: *existing reinforced concrete, new structural steel.*
Major materials: *stucco walls, carpet and marble floors, glass.*
Mechanical systems: *forced-air heating and air-conditioning.*
Costs: *withheld at owner's request.*
Photos: *Mihail Moldoveanu, except as noted.*

The roof terrace (14), reached by elevator (16), commands striking views of the Barcelona skyline (not to mention its own). The skylighted space topped by the "eye of God" mast connects the two towers at the uppermost level (15).

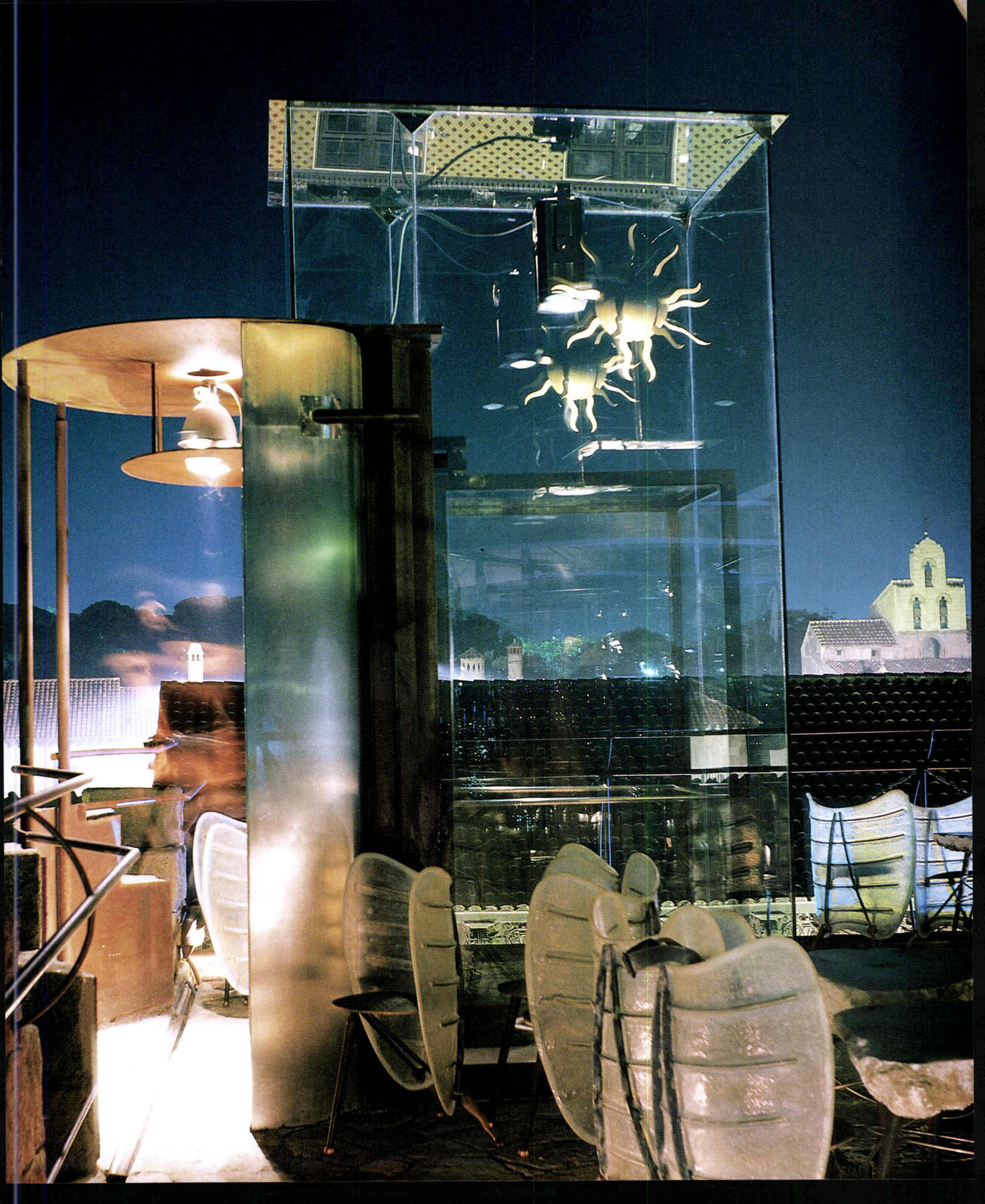


Hisao Suzuki

15

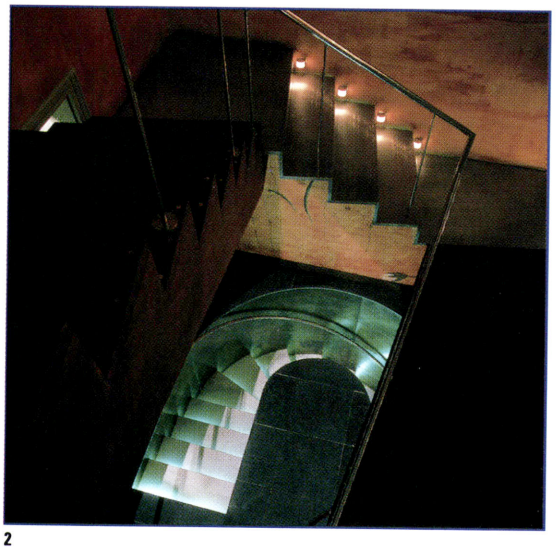


16





1



2



3

Just inside the entrance to Tragaluz are a cylindrical wardrobe (3) and stairs (2) to the basement restrooms and to the dining area above. The bar area (1) is dominated by a light fixture that stretches over the bar. Upstairs, a secluded dining area with an undulating paper screen (4) is tucked along the way to the main dining area.



Tragaluz

Pepe Cortés

This restaurant and bar, located in the Pasaje Concepción, a small pedestrian street in the Eixample district of Barcelona, is most notable for the glass roof that covers the main dining area. The roof, which spans what was once the two-level roof of a nondescript commercial building, is a remarkable technical achievement: Its sliding roof panels can be opened and closed electronically, and electronically operated shades can be closed to keep out the harshest sun.

Designer Pepe Cortés has attempted, with some success, to create a dining space that blurs the distinction between indoors and outdoors. While the rustic flooring and tree-trunk staircase of this space aid in this effort, other, more refined gestures like the murals by Isabel Esteve – and the decidedly indoor furnishings – subvert it.

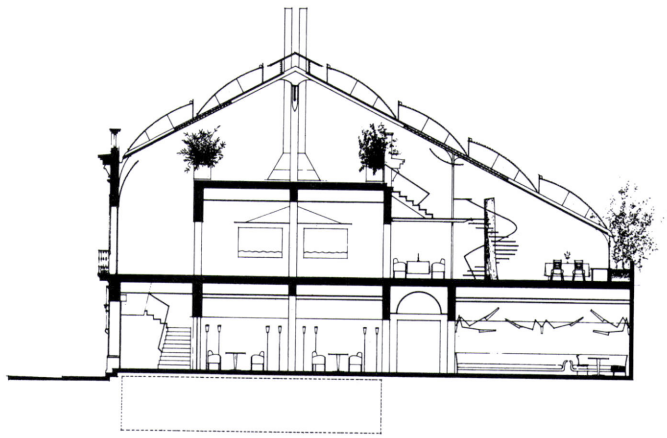
The skylighted space is not, however, all there is to Tragaluz. (The name means "skylight" in Spanish, but is also a pun on the literal meaning, "swallow light.") At the street level are a fast-service dining area served by a separate kitchen (called "Tragarapid," or "swallow fast"), and a bar ("Tragabar"). Here, where they are not competing for attention with the skylight, some of Cortés's smaller moves are more powerful: the cylindrical wardrobe just inside the entrance, the mosaic floor of the bar, the steps to the basement that are cut crisply into the floor. Tragaluz lies somewhere between clarity and messy vitality, combining – for better and for worse – a simple architectural gesture with the Catalan penchant for multiple layers of ideas.



5

Project: *Tragaluz, Barcelona.*
Designers: *Pepe Cortés Asociados and Sandra Tarruella, Barcelona.*
Client: *Rosto SA, Barcelona.*
Site: *existing commercial building in Pasaje Concepción, a small pedestrian street in the Eixample section of Barcelona.*
Program: *7900-square-foot restaurant with bar, conventional dining room, and fast-service dining room, all served by separate kitchens.*
Structural system: *existing masonry bearing walls, metal frame glass roof.*
Major materials: *wood and mosaic floors, stucco walls.*
Mechanical systems: *gas-fired forced-air heating.*
Consultants: *Jesus Jimenez, civil engineer; Javier Mariscal, graphic designer; Isabel Esteve, stucco murals.*
General contractor: *Prodelta SA, Barcelona.*
Costs: *not available*
Photos: *Jordi Sarra.*

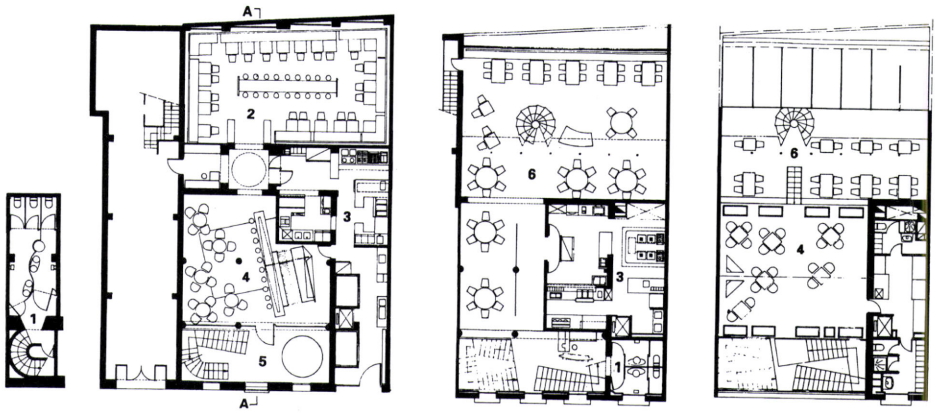
Three floor levels follow the pitch of the glass roof of the main dining area. (see section). The two dining levels are connected by a spiral staircase wrapped around a massive tree trunk (5). At the peak of the roof is another bar/ lounge area with a fireplace (6).



SECTION A-A

1 RESTROOMS
2 FAST SERVICE DINING
3 KITCHEN
4 BAR
5 ENTRY
6 DINING

20'/6m



BASEMENT FIRST FLOOR PLAN SECOND FLOOR PLAN THIRD FLOOR PLAN

N 20'/6m

6



Exposing the Layers of "Dwelling"

In a townhouse by Peter Wheelwright, a pair of lofty foyers highlight the structure of a Chelsea household.

Rowhouse façades are like layers of protective insulation: Their anonymity promotes the privacy of their residents. In an exceptional New York rowhouse, renovated by Peter Wheelwright, the household is protected by a second layer of insulation: a dramatic four-story foyer that acts as a spatial counterpart to the utterly conventional façade. For the first-time visitor, this shaft, as tall as the building itself, is a surprising point of entry. It is an introverted sentinel tower, a place where visitors must wait for residents to appear in the upper windows before being granted entry to the domestic realm.

While the tower-foyer is a memorable space in its own right (its attenuated proportions are best suited for brief intervals), it is the prelude to a complementary foyer, a two-story volume in the middle of the house. This is a more ample family foyer, defined by the profile of its coved ceiling and bordered by steel and mahogany railings and a Barragán-inspired flight of stairs. It is a space as self-revealing as the tower is enigmatic. This represents the *axis mundi* (literally, the axis of the world) for the house, the place where its spatial and social order are disclosed: From here one can look across to the glazed garden wall or ascend to the library and billiard room on a mezzanine set back from the two-floor, steel-reinforced masonry façade. Glass blocks in the ceiling transmit light from the master bedroom above.

Wheelwright demolished the house's original room partitions so that family members would not feel segregated from each other. Even if others are not physically present, the spaces they use are discernible from the family foyer. This client request for a cohesive interior, in its physical and social senses, coincided with Wheelwright's phenomenological approach to design. He believes that the interior can be more synthetic if the architect applies the theories of Gabriel Marcel,



From the balcony in the library (1,2), residents can greet guests in the entry foyer. Its terrazzo floor extends the length of the first level (4), a link between this closed space and the open interior beyond. From the family foyer in the middle of the house, one can see the tiered library and living areas (3), or the dining and kitchen area, which opens to the garden (5).

1



2



3



4

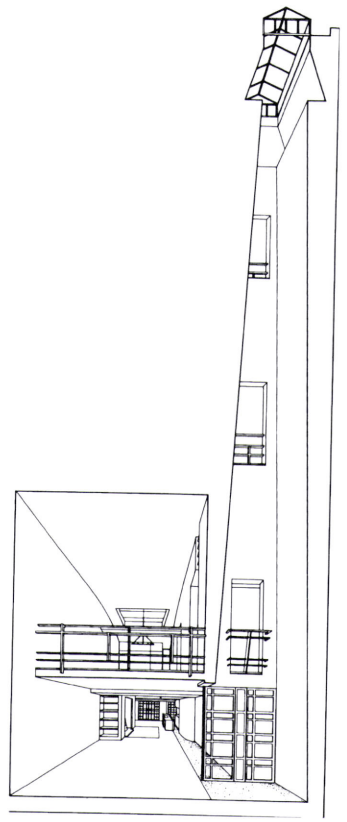


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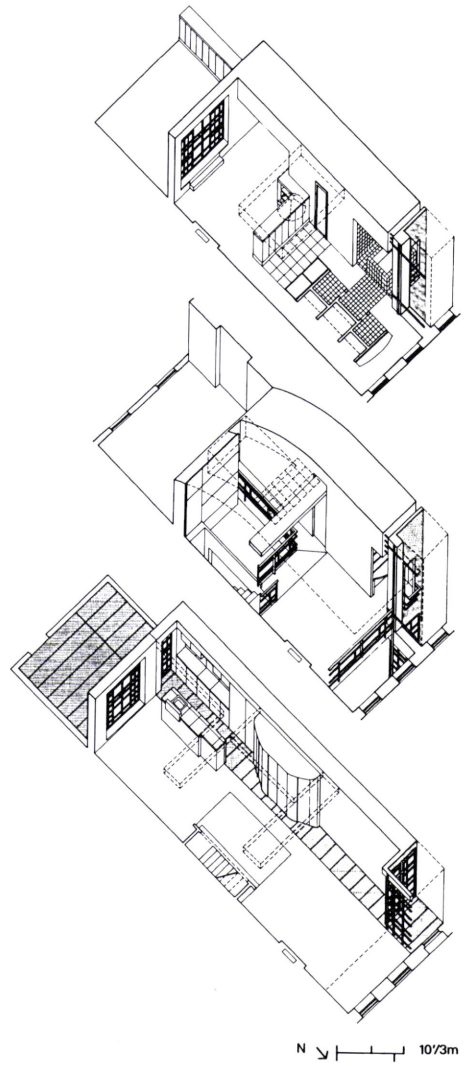
Edmund Husserl, and other philosophers of phenomenology. Like these writers, Wheelwright believes that Rationalism (and its parallel architectural emphasis on function and utility) do not adequately describe the way we interact with our surroundings. He believes that one's self-identity can never be detached from one's surroundings, and concludes that the dwelling is an extension of the individual.

The human figure is the guiding presence for Wheelwright's interior – "the inhabitants are the architectural subject" – but his design vocabulary is only marginally figurative. The tall foyer, for instance, is not a distinct object; as seen from the mezzanine, it is finished in white plaster that blends with the rest of the house. The tower's absorption within the whole is intentional: "I try to build essences, not tokens," Wheelwright says. The former allow more ambiguity – an apt way to suggest that the individual and the environment, in philosophical terms, form a continuum.

Philip Arcidi ■



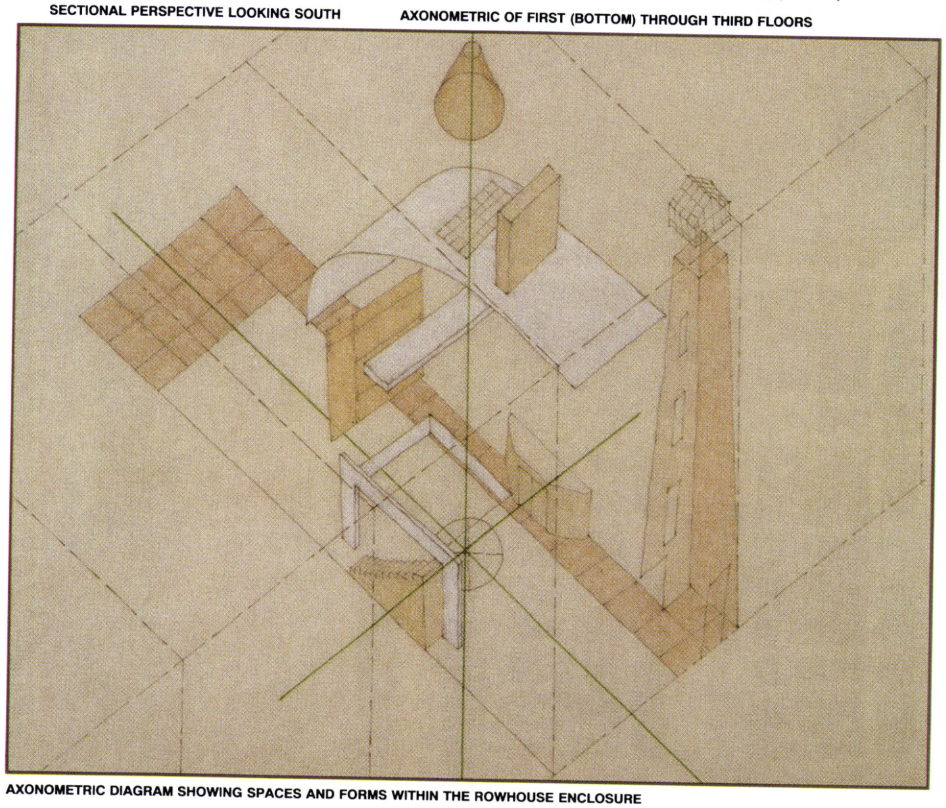
SECTIONAL PERSPECTIVE LOOKING SOUTH



AXONOMETRIC OF FIRST (BOTTOM) THROUGH THIRD FLOORS

Project: *townhouse renovation, New York.*
Architects: *Peter Wheelwright Associates, New York (Peter Wheelwright, principal; Jessica Pineo, job captain; James Gettinger, Beth O'Neill, project team).*
Program: *convert a 3600-sq-ft, 4-story townhouse from apartments to a single-family home.*
Major materials: *maple, mahogany, copper, steel, terrazzo, diamond wire and sand-blasted glass, pigmented plaster with carborundum chips (see Building Materials, p. 176).*
Mechanical system: *two-zone forced air heating and cooling.*
Consultants: *Robert Silman Associates, structural; Dominick DePinto & Air-Excell, mechanical; Richard Shaver, Edison Price Co., lighting.*
General contractor: *Kahn-Snyder Co.*
Photos: *Eliza Hicks.*

In the family foyer (6), the copper wall panel is set slightly forward from the coved wall, so that it seems to be both an object and an integral part of the wall. One can render this foyer a more intimate space by lowering the wrought iron chandelier, designed by Wheelwright.



AXONOMETRIC DIAGRAM SHOWING SPACES AND FORMS WITHIN THE ROWHOUSE ENCLOSURE



Theme and Improvisation

In the Manhattan offices of Island Records,

Walz Design displays virtuosity in the fusion of old and new.

While too many designers tend nowadays to oscillate wildly between invention and conformity, Kevin Walz negotiates a consistently original line, seizing on the creative opportunities intrinsic to each project's constraints.

In the transformation of the top floor of a brick corner building near lower Broadway into new offices for the Island Records division of Island Trading Company, Walz's design team capitalized on the physical eccentricities of the derelict industrial space and mined the idiosyncracies of the client's brief for additional design cues.

Walz describes a "euphoric feeling" to the found space, a feeling that stemmed from great amounts of natural light, pouring through two window walls along the street-facing façades, and from a number of large, rather randomly placed skylights. The gutted space was further blessed with high ceilings, which dipped unevenly to follow the slope of the roof. The final touch, at once rustic and regimented, was provided by the existing wood post-and-beam structural system.

The program was to house various staffers from Island Trading and to accommodate key portions of Island Records, including the video and design departments, the jazz label Antilles and the Caribbean label Mango. The music people could hardly be expected to thrive in a "nine to five corporate straitjacket," Walz says. Rather, they would work late hours and depend on a good deal of raucous interaction. "We were told there would be tremendous amounts and varieties of music and lively meetings going on simultaneously," he continues. "It was part of the buzz in the place that [the client] wasn't interested in stifling."

Rather than follow the rote corporate layout – offices along the windows, mechanicals hidden

(continued on page 110)



1

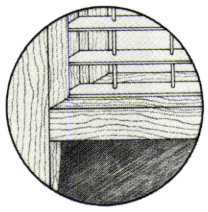


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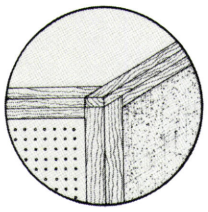
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Reversed playground matting, African slate, and steel mesh create a vibrant palette for the entry (1). The reception lounge (2) is furnished with corkball couches by Walz. Devised by colorist Don Kaufman, three "non-color" paints – a wainscot in glossy "aggressive" white, a complex matte dun above it, and a purplish saturated white on the shaded ceiling – provide a luminous, shimmering effect along the perimeter hall (3), and emphasize a 4'3" datum carried throughout the design.

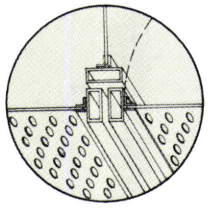




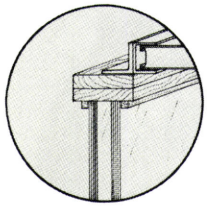
GRATING AND WOOD FRAME



TYPICAL WOOD FRAME CORNER



METAL PANEL AND STEEL TUBING



PANEL CEILING, WOOD FRAME, GLASS WALL

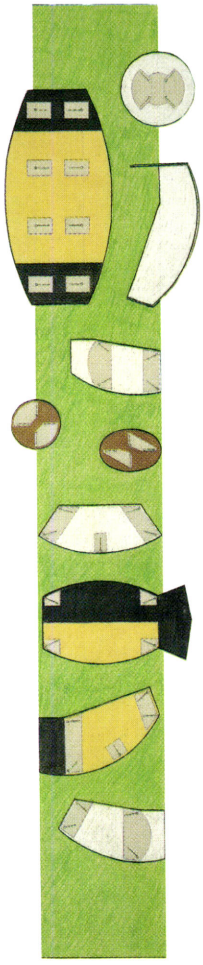
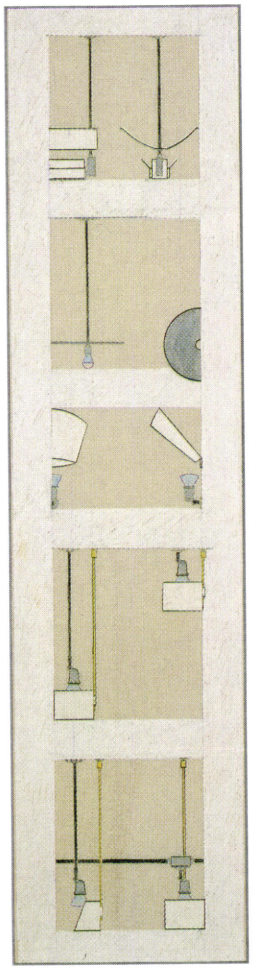
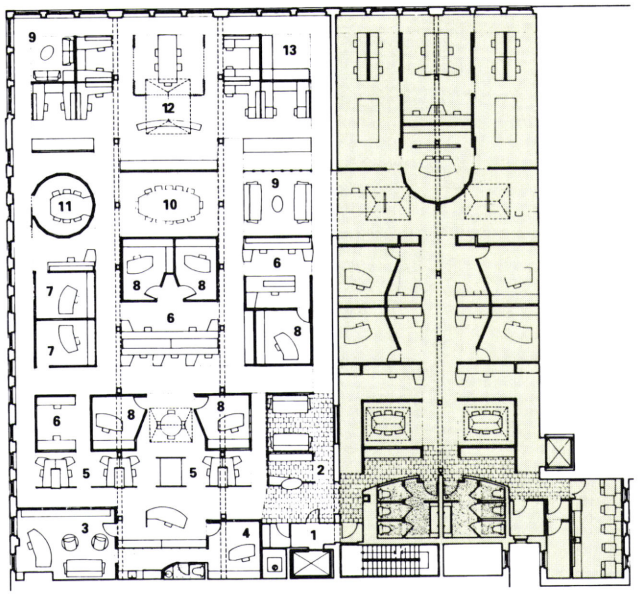


TABLE AND DESK TEMPLATE



CUSTOM LIGHTING STUDY



PLAN (PHASE II IN TINTED PORTION)

N

20'/6m

1 ENTRY
2 RECEPTION, LOUNGE
3 FOUNDER'S OFFICE
4 EXECUTIVE'S OFFICE
5 ASSISTANTS' WORKSTATIONS
6 OPEN AREA WORKSTATIONS
7 SEMI-ENCLOSED OFFICES
8 ENCLOSED OFFICES
9 LOUNGES
10 CONFERENCE
11 VIDEO
12 ART DEPARTMENT
13 REPRODUCTION



4

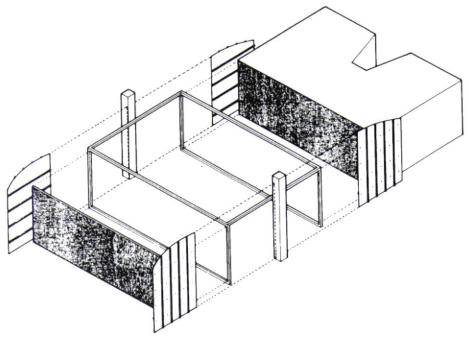


5

6

An assemblage of readily combined materials enabled the Walz design team to create a string of visually distinct spaces. The workstations (4) were built of cork flooring desktops and walls of marine plywood that was blackened and sandblasted (or vice versa) to create an animal skin effect or a densely textured finish, respectively. The company founder's office (5), also furnished by Walz, features a sisal floor, one tar-papered wall, and a gold-painted wall with a variable vision-glass strip window. The visual director's office (6) is defined within the open art department by a curtain made of a double layer of burlap up to datum height, with nylon mesh above it.


EXIT



7 SCHEMATIC AXONOMETRIC OF CONFERENCE AREA

(continued from page 106)

behind dropped ceilings – the company founder wished to preserve the quirky character of the space as a mirror of Island's maverick philosophy. Accordingly, in phase I Walz's cardinal design decisions were to keep traffic on the light-washed perimeter and to restrict private and semi-private offices to a few contained units within the free space, as small self-supporting buildings that would define the surrounding work areas.

The "quality and richness" of the old columns and beams inspired Walz to reverse the construction of the interior partitions, leaving solid poplar and aluminum frames exposed, and to develop a diverse array of surfaces for infill panels, including tarpaper, masonite, perforated metal, tectum, vinyl impregnated plaster reversed to show its jute backing, translucent fiberglass, tempered glass, and cork. Used in varying combinations these offered distinct identities, color, texture, and depth (as well as tack surfaces vital for copious Island "graffiti"); as a vocabulary, it couldn't be farther from slick, noncommittal corporate dialect.

In sum, the new offices for Island are as engaging as good jazz: A composition that subtly laces original rhythm and line with joyful variations.

Ziva Freiman ■

Project: *Island Records, phase I, New York.*
Designers: *Walz Design, New York. (Kevin Walz, principal in charge; Christopher Smith, project manager; Amy E. Flom, Francesco de Leon, Steve J. Schappacher, design team).*
Client: *Island Records division of Island Trading Company.*
Site: *top floor of two adjoining brick industrial buildings.*
Program: *phase I, about 8500 sq ft for 7 executive offices, 4 open offices, 28 workstations, art dept., 2 conference rooms, 2 lounges, reception, reproduction area.*
Structural system: *existing wood beams and columns, brick shell. New exposed poplar and aluminum frame partitions.*
Major materials: *steel, plywood, tempered glass, drywall, fiberglass panels and grating, pigmented plaster, masonite, tectum, cork, tarpaper, outdoor carpet (see Building Materials, p. 176).*
General contractor: *Silver Rail Construction Co., New York.*
Costs: *approximately $90/sq ft.*
Photos: *Eduard Hueber.*

Walz was interested in setting up an ambiguous "dance" between "positive" and "negative" spaces. By means of sliding aluminum doors (9, 10), the conference room changes character, as do the elongated spaces flanking it (7). The video conference room (8), with leathertop table and chairs by Walz, occupies a more figural space.



8



9

10



Territorial Hybrids

In the renovation of a New York apartment, Hariri & Hariri offers controlled complexity in response to the chaos of urban life.

Hariri & Hariri poses a realistic model for urban living with its renovation of the Silbermann apartment on Manhattan's Upper West Side. Taking their cue from the paradoxical environments our cities have become – where space is a precious commodity and needs are multifaceted – Gisue and Mojgan Hariri (P/A, July 1990, p. 64) have pursued a function-based aesthetic rich in texture and form.

In the main room (a space measuring 20′ x 22′), dynamic sculptural volumes demarcate kitchen, living, and dining territories. Each territory is a sovereign entity, elegantly composing a symbiotic whole: A bar unit combining cabinet/counter, bar, and TV/VCR cabinets also acts to partition the kitchen from living and dining areas; a fireplace mantel includes a log box and a utensil holder; a ceiling fixture, housing downlights and wall washers, sets living room boundaries.

Their decision to "collage" spaces and functions with "hybrid constructions," says Gisue, fulfills philosophical and pragmatic objectives: As one of the last refuges, home must both respect and rebuff urban incongruities. The skewed geometries of the counter tops, the angular plane of the mantelpiece, and the just-short-of-violent "spike lumen" ceiling fixture, all reflecting aggressive qualities of the streetscape, are forms balanced (and softened) by their materials: marble, patinated steel, and burnished metal, respectively. The fireplace wall's stucco-clad surface is an additional buffer, adding a sense of calm and order.

The Hariris' hybrid assemblages transcend the usual utilitarian aesthetic of multifunctional units, their complex functions and subdued veneers thoughtfully responding to the frenetic urban situation beyond. **Abby Bussel** ■



1

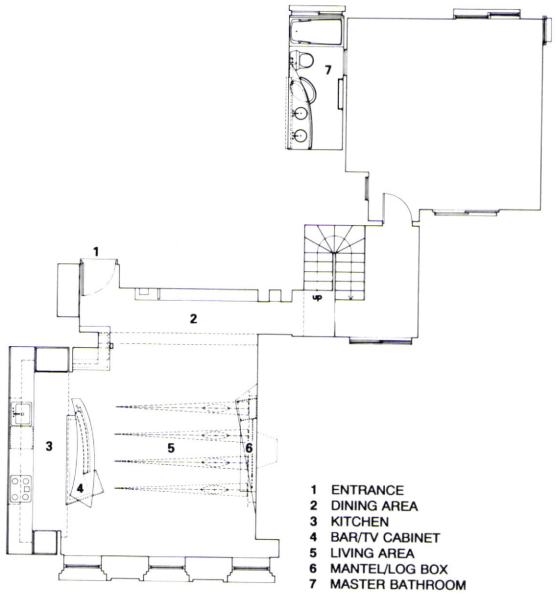
The steel mantel and stucco-clad wall are illuminated by the "spike lumen" above (1); a partial view of the dining area is in the foreground. The Hariris opened up a semi-enclosed kitchen and designed cabinets of green aniline-dyed ashwood and a wood, steel, and marble partition (2); spikes from the living area symbolically meet the kitchen at strategically hung pendant fixtures designed by the Hariris. The master bathroom holds a "hybrid" counter/cabinet (3); the vertical tube fixture is a Hariri design.



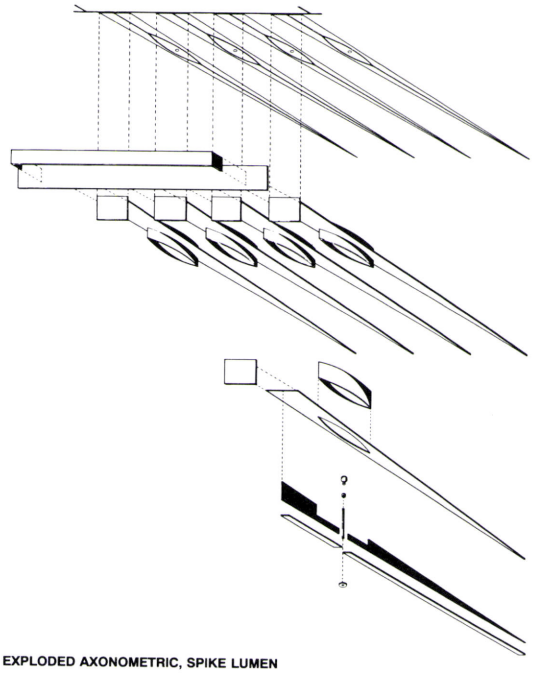
2



3



FLOOR PLAN



EXPLODED AXONOMETRIC, SPIKE LUMEN

Project: *Silbermann Apartment, New York.*
Designer: *Hariri & Hariri (Gisue Hariri and Mojgan Hariri, principals; André Bideau and Paul Baird, interns).*
Client: *Ellen and Jon Silbermann.*
Program: *renovation of a pre-war, three-bedroom apartment on Manhattan's Upper West Side, with work limited to the main living area and master bathroom.*
Major materials: *ashwood, marble, steel, stainless steel, stucco (see Building Materials, page 176).*
Contractors: *Marko Tomich Inc., contractor; Scott R. Madison, metalwork; Manhattan Marble Co., stone work; Halton Hall, stucco work; and Peter Superti, cabinetry.*
Cost: *$135 per square foot.*
Photos: *John Hall.*

Two small offices in California contradict the conventions of this building type with a less rigid, though no less rigorous, design ethic.

The established "fringe" of West Coast architects – Gehry, Israel, Moss, Morphosis, et al. – provokes emotional responses whether through building museums, halls of academia, or houses; their individual vocabularies reinvent our notions of place. The two small office projects presented here, one in the Emeryville section of the Bay Area by Phil Mathews, Regan Bice, and Charles Debbas (formerly Mathews Bice Debbas, San Francisco), the other in Los Angeles by David Kellen Architect, Los Angeles, represent a school just beginning to emerge.

The aesthetic manifested in these designs can, on one level, be identified as Gehry-inspired. But, while these two firms share a predilection for plastic forms, their aesthetic is less a mimicking of Gehry than a shared sensitivity toward the poetic potential of design. The offices of Zuk & Associates by Mathews Bice Debbas, and Shinko Management by David Kellen are highly individual expressions, their formal and spatial explorations more restrained than the work of their better known colleagues.

In discussing this phenomenon, David Kellen (P/A, Sept. 1989, p. 88) sees "a lot of architects working in a realm where they are manipulating architecture the way artists manipulate art." For Kellen, "It's not simply how a space will work as offices, but how forms work out as an aesthetic composition." This approach is perhaps most intriguing when called upon to meet the functional demands of the workplace.

While large corporations have tended to commission buildings by the likes of Pei, Johnson, or SOM (with lobbies enhanced by Eric Fischls and David Hockneys) to demonstrate their power and influence, it is the small company that has, particularly in California, embraced less conventional design. Though their programs differ, the Zuk and Shinko offices are prototypical examples, where the line between conventional and unorthodox office design has been effectively blurred.

Abby Bussel ■



Zuk & Associates' owner works behind the integrally-colored, battered cement plaster-clad wall (1); the wall, suspended maple wood partition, and "bowling alley" walkway form the office's entrance, leading visitors to the reception area beyond the glass block wall.

1



Zuk & Associates

Mathews Bice Debbas

Zuk & Associates, a financial consulting firm, commissioned Mathews Bice Debbas to design their office in an early 20th-Century warehouse (now office condominiums) with a strict program: The plan had to be based on company hierarchy; the boss required private quarters where she could hear, but not be seen by, others; a mezzanine-level rental office had to be included; the conference room had to be situated in front of the only windowed elevation in the space.

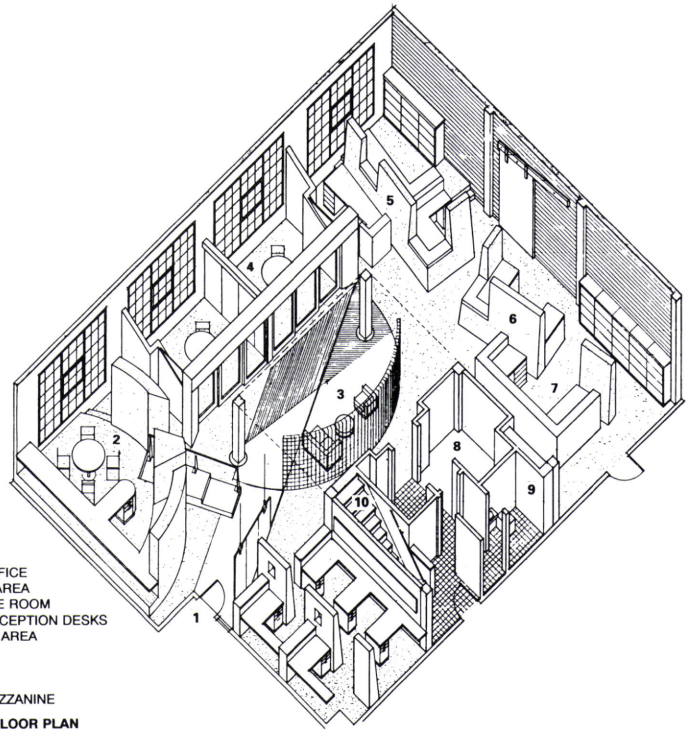
With the 3000-square-foot, double-height space truncated at its midsection by the mezzanine, the architects found themselves working with a U-shaped floor plan. Freestanding forms were employed to accentuate what was left of the once-open space and to release the architects from dealing with the unreinforced brick building Zuk is housed in. (This is earthquake country, after all.)

Based on a "town square" configuration, the plan is anchored by a semi-circular reception area around which activity flows and company hierarchy is arrayed. The glass-walled, ceilingless conference room was designed to maximize the flow of natural light through the space.

Offices are open to various degrees; battered cement-plaster cladding softens the powerful massing of the workstations' monolithic guardians. The boss's quarters, set three steps above the others, has a curved façade, broken only by a slender cut-out for observing employees and visitors. One rung down on the hierarchical ladder are the associates' offices; here, looming pyramidal forms provide privacy while helping to restrain the space's vertical thrust. Clerical offices are set behind less imposing compositions.



2



1 ENTRANCE
2 OWNER'S OFFICE
3 RECEPTION AREA
4 CONFERENCE ROOM
5 CLERICAL/RECEPTION DESKS
6 PHOTOCOPY AREA
7 KITCHEN
8 STORAGE
9 BATHROOM
10 STAIR TO MEZZANINE

AXONOMETRIC, FLOOR PLAN

Project: *Zuk & Associates, Emeryville, California.*
Architects: *Mathews Bice Debbas Architects, San Francisco and Berkeley, California (Philip Mathews, Regan Bice, Charles Debbas, principals). The firm has disbanded; its principals now work as individual practitioners.*
Client: *Zuk & Associates.*
Program: *second-floor rehabilitation of an early 20th-Century warehouse (now commercial condominiums) into offices.*
Major materials: *integrally-colored cement plaster, gypsum board, maple, slate, carpeting, glass block (see Building Materials, p. 176).*
Consultants: *Lisa Pope-McDonald, Lisa & Associates Interior Design, interior furnishings.*
Contractor: *Paragon General Contractors and Cabinetmakers.*
Costs: *withheld.*
Photos: *Richard Barnes.*

Zuk's "town square" (2) acts as a distribution point for visitors and the main circulation route for employees; the base of the mezzanine level creates its lowered ceiling. The conference room can be divided in half by a folding door. Heating ducts (added by the architects), and existing skylights, wood trusses, and joists work together as a linking device throughout the space. Punched holes in the "Egyptian-monument-like" creations, appear – with the entire collection of workstations – like a fortified castle reinvented for the 20th Century (3).



A Material World

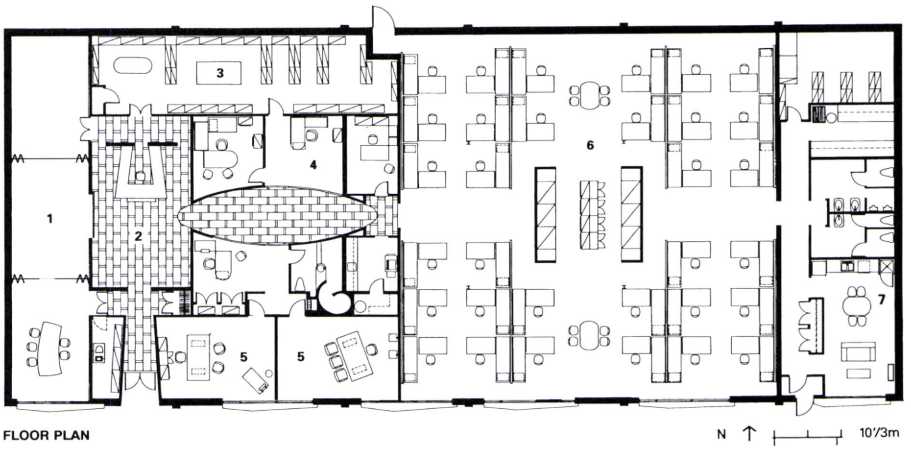
ffices, Toronto

The Toronto interior design firm Yabu Pushelberg

explores the limits of materials and finishes in its own offices.



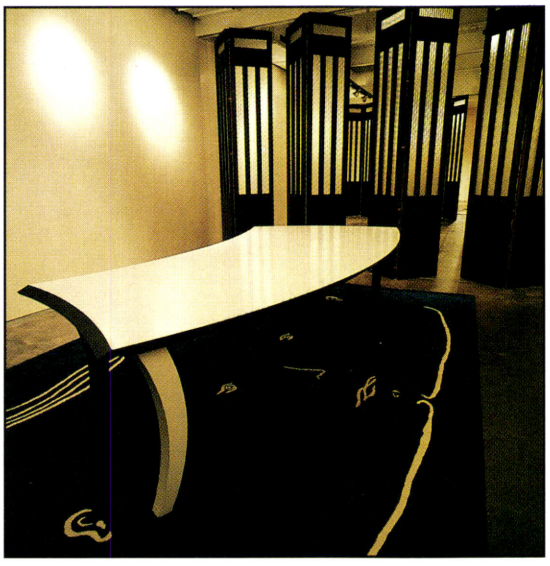




FLOOR PLAN



4



5



3

David Whitaker

6

Further experimentation occurs at every turn. The doubly curved ceiling in the elliptical space is built like a wooden boat, with lath bent around wooden ribs. The bleached, particle-board partitions, separating workstations in the drafting room, are stiffened like sails, with V-shaped cable rigging attached to the ceiling. And creating three-dimensional effects, the custom carpets in the partners' offices exploit methods of tip shearing, sculpting, and color blending piles.

What is the importance of such work? Why attempt to orient architecture away from consumption to craft? As Christopher Lasch has argued, consumption is inextricably tied to the notion of progress, to the pursuit of "the new" for its own sake. That pursuit has demanded of architecture, especially in the last two decades, a never-ending supply of easily appropriated images.

A highly crafted architecture, such as this office by Yabu Pushelberg, resists this easy consumption. It is not tied to any particular style, and it never really progresses. It is, in short, an appropriate way of getting beyond the blatant appropriation of architecture. **Thomas Fisher** ■

Project: *Yabu Pushelberg Offices, Toronto, Canada.*
Designers: *Yabu Pushelberg (George Yabu, Glenn Pushelberg, design partners; Michael Légère, technical/drafting).*
Program: *interior design office in an 11,000-square-foot former produce warehouse.*
Structural system: *brick bearing walls, heavy timber framing.*
Major materials: *plaster, steel, wood.*
Consultants: *Thomas Fekete Limited, mechanical/electrical; Onen & Hayta Limited, structural; Dermot Sweeny Architect, code consultant.*
Contractor: *Pancor Industries Limited.*
Costs: *$100,000 (Canadian).*
Photos: *Chris Nicholls, except as noted.*

An elliptical hall in the office area (3) has a ceiling built like a boat. That nautical reference continues in the rigging that stiffens the drafting room partitions (4) and in the bathroom accessories (6). The meeting room, with its custom carpet and furniture, is divided by folding wood doors with ribbed glass (5).

Mapplethorpe and Mies

In these offices for The Robert Mapplethorpe Foundation, 1100 Architect explores the sensual aspects of Minimalism.

The politics and publicity surrounding Robert Mapplethorpe's photography have blinded some critics to his art. Unlike most Minimalists, Mapplethorpe's images, with their supple human and plant forms set against spare black or white backgrounds, are extremely sensual, a quality captured in the new offices for The Robert Mapplethorpe Foundation, designed by David Piscuskas and Juergen Riehm of 1100 Architect.

Located in a 2000-square-foot loft in lower Manhattan, the foundation had few requirements: photography storage, a work room, an office, a conference room, and a reception area. Piscuskas and Riehm responded with the fewest possible moves, inserting into the space two freestanding walls and a large retractable door.

Their Minimalism, however, like Mapplethorpe's photography, exudes a certain sensuality. The one wall, with its slightly curved, beech-clad surface, and the other, with its slightly mottled, tinted-plaster face, both recall Mapplethorpe's close attention to human form and skin tone. And the thickness of those freestanding elements, set within the loft, gives them weight and presence, like bodies posed against a white background.

If this design recalls some of the formal qualities of Mapplethorpe's art, it also brings to mind the Minimalist architecture of Mies van der Rohe. Piscuskas and Riehm express admiration for Mies, especially those aspects of his work that resisted mass consumption: his sense of proportion and his preoccupation with detail. But they reveal here another, lesser-known side of Mies.

Mies was strongly influenced by Hegel's thought, central to which was the claim that we cannot separate mind and body, the intellectual from the sensual. From such apparent opposites, thought Hegel, we must forge a new synthesis. An example of this in Mies's work was his use of visually rich materials, such as gold-plated columns or bronze curtain walls, and lush surfaces, such as veined marble or book-matched paneling, within the highly rational order of his buildings. In the Mapplethorpe project, such a synthesis of opposites emerges not only in its austere form and

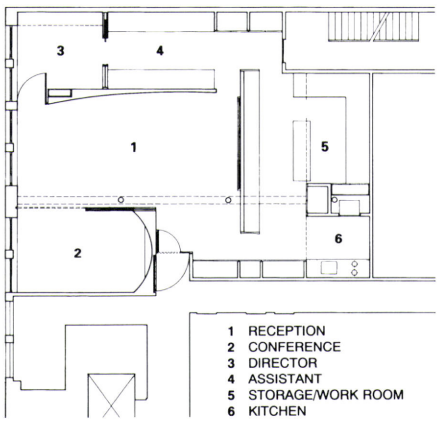


Two walls, one clad in beech (1) and the other in rubbed plaster (2), define the reception area.

1



2



FLOOR PLAN

sensual materials, but in its scale, at once heroic and delicate, and in its character, at once massive and light.

The Hegelian sensibility of Mies, however, has not always been well understood by either his American acolytes or his critics. (In the U.S., born of the Enlightenment, we seem to prefer the obvious distinction over the subtle synthesis, demanding a clear separation between church and state, structure and ornament, or, in Mapplethorpe's case, art and sex.) Mies's closest American followers came to equate Minimalism with sensory deprivation, producing all too many repetitive, monochromatic buildings.

But Mies's Post-Modern critics also have done him an injustice by branding him a puritan. Like branding Mapplethorpe a pornographer, such simplicities relieve us of the more difficult task of understanding the subtleties of this Minimalist art. The Robert Mapplethorpe Foundation was established, in part, to further such understanding. And, in 1100 Architect, it found a kindred spirit.

Thomas Fisher ■

Project: *The Robert Mapplethorpe Foundation, New York.*
Architects: *1100 Architect, New York (David Piscuskus, Juergen Riehm, architects; Ines Elskop (Elaine Monchak, Mary Heath Carpenter, Gordon Haslett, project assistants).*
Client: *The Robert Mapplethorpe Foundation.*
Site: *2000-square-foot loft in Soho building.*
Program: *offices and archives.*
Structural system: *timber and cast-iron, masonry walls.*
Major materials: *marine plywood, hot-rolled steel, tinted plaster (see Building Materials, p. 176).*
Mechanical system: *gas-fired boiler, circulating hot water, forced air with vav dampers.*
Consultants: *Robert Silman Associates, structural; IP Group, mechanical; Donald Kaufman Color, color.*
General contractor: *Massartre, Ltd.*
Costs: *withheld.*
Photos: *Michael Moran.*

The conference room is separated from the reception area by a sliding steel, glass, and beech-paneled wall (3,4). Although small, the offices are full of elegant, yet minimal details, such as the transluscent glass entrance (5), the conference room shelving (6), and the office's glazed steel pivot door (7).



3



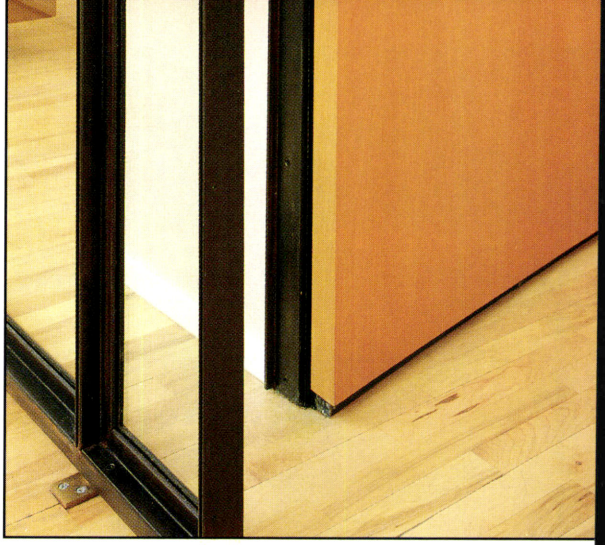
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5



6



7



Knightsbridge Zen

In a London pied-à-terre for a Chicago couple, designer John Pawson evokes the elegant austerity of a Japanese monastery.

On a quiet square in Knightsbridge, a conventional 800-square-foot flat has been transformed into an austere composition of off-white planes hovering above flooring of rare Japanese oak. The owners, an art-collecting couple from Chicago, commissioned designer John Pawson to produce the kind of painstaking understatement here that he has demonstrated in other London interiors.

Pawson has marshalled exceptional means to ensure geometrically pure surfaces. The severely minimal marble bathtub, for instance, is actually cut from a Carrara monolith. The uninterrupted planes of the cabinet doors are coated with 16 layers of polyester paint, producing a exquisite ivory-like surface, at a cost of about £10 ($18) per square foot – on both sides of 70 linear feet of doors. To maintain the discipline of floor-to-ceiling openings, Pawson has concealed the conventional entrance door with a full-height panel, mechanically coupled to open and close with it.

A designer who quit studying at the AA in London when he got too busy with commissions, Pawson developed his design convictions during a previous four-year stint in Japan, where he was briefly a novice in a Buddhist monastery. With his concentration on Minimal detailing and his love of fine materials, Pawson shows an affinity to Mies and to sculptors such as Donald Judd, as well as to the historic Zen masters. **John Morris Dixon** ■

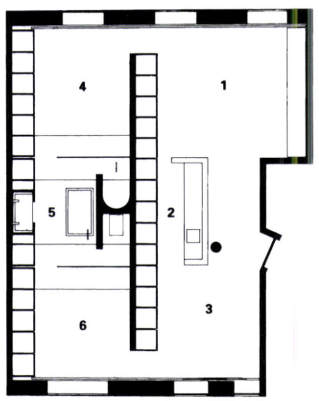


1



Richard Bryant

2



1 LIVING
2 KITCHEN
3 DINING
4 BEDROOM
5 BATH
6 STUDY

FLOOR PLAN N → 10'/3m

Project: *apartment, Knightsbridge, London.*
Designer: *John Pawson, London.*
Client: *a couple from Chicago.*
Program: *flat in 1950s apartment building; 800 sq. ft.*
Structural system: *existing concrete columns and slabs.*
Major materials: *Japanese oak floors, white Carrara marble floors, counters, tub, and lavatory; polyester finished cabinets.*
Consultant: *Angus Gibson Music Limited, acoustics.*
Photos: *Ian Dobbie (copyright John Pawson), except as noted.*

The flat's living area (3) has a pair of Mies chairs (only one in the photo, as the designer prefers) sharing a floor-mounted lamp; an oak shelf is mainly for art display. A freestanding cubic volume (5,6) conceals the kitchen, which also occupies part of a cabinet-lined partition; a cylindrical column conceals plumbing risers. Beyond the partition, a bedroom/bath/study suite (4) is divided by acid-etched glass partitions. The tub (1) is cut from a single block of marble, and matched slabs form a wash basin (2).

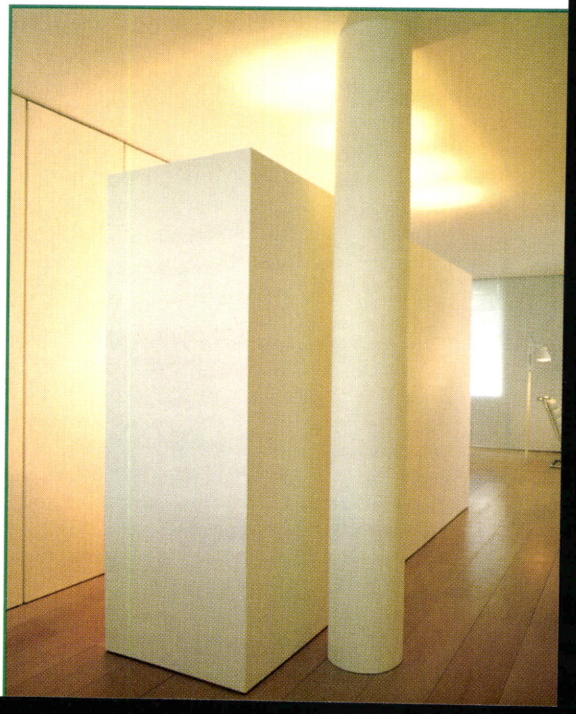
3, 4



5



6



A Celebration of Intricacies

For his own top-floor apartment overlooking the Thames,

architect John Young has composed an assemblage of bravura details.

Perhaps the single most distinctive British contribution to the architecture of the last decade is an enthusiasm for improvisation. People like Norman Foster and Richard Rogers, Future Systems and Eva Jiricna are linked not so much by a stylistic vocabulary, but their preference for customized design solutions over off-the-peg alternatives.

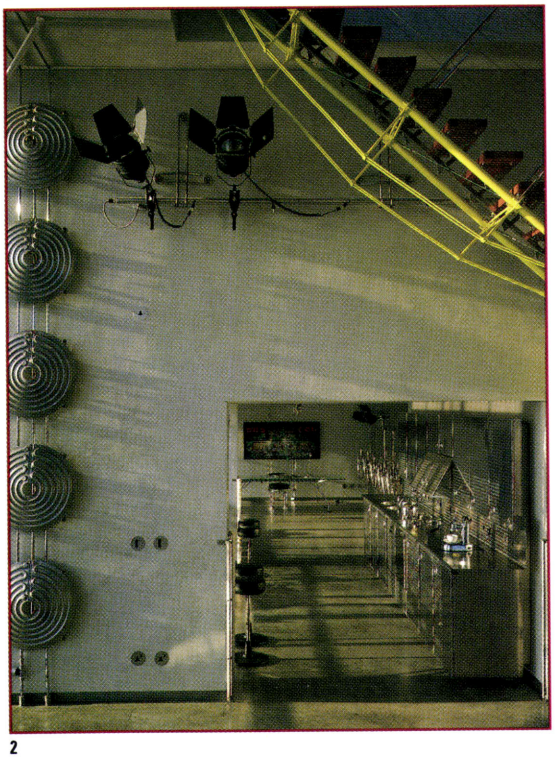
Nobody exemplifies the British approach more than John Young, an architect who has worked with Richard Rogers for nearly 25 years. He was in the Team 4 office as a student while Rogers was still in partnership with Norman Foster. He was an assistant during the Renzo Piano period, then became a partner. His whole approach to architecture is based on a passion for exploring the processes which go into its manufacture. He scours catalogs and small workshops for materials that appeal to him. He hates being a passive consumer, but always tries to get involved with the people who make the products that he uses.

Young's lack of interest in the more conventional architectural preoccupations of composition is total. Instead he delights in creating what are in essence mechanisms of extraordinary ingenuity, which have qualities that are quite outside those which would be recognized as architecture in the academic sense.

His newly completed apartment, carved out of two units on the top floor of a Thameside apartment block, itself designed by the Rogers Partnership, is the only piece of architecture that he has built in his own right. Young is quick to deny that it is a manifesto, or any kind of rhetorical statement. But it certainly amounts to an encyclopedia in which Young has brought together the fruits of years of careful observation and research. Inspired by the imagery of lighthouses and airships, ferris wheels and industrial structures, he has



1



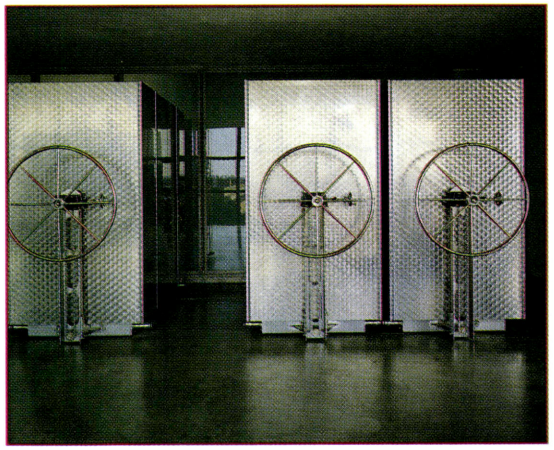
2



3

The core of the apartment is a two-story living space overlooking the Thames through stretches of curtain wall. A sleeping loft along one side (1) is reached by a teak-treaded stair (Selected Detail, page 135). From this loft (3), the view extends across the dining area to the river; note glass lenses in the loft floor. A view from the dining area through the kitchen (2) shows wall-mounted platecoil heaters next to the curtain wall; the stainless steel kitchen cabinets have a machined moiré finish inspired by trucks the architect saw in Japan.





4

deployed a remarkable collection of skilled industrial craftsmen and made the most of their talents to produce a whole range of highly sophisticated one-offs from door frames to staircases.

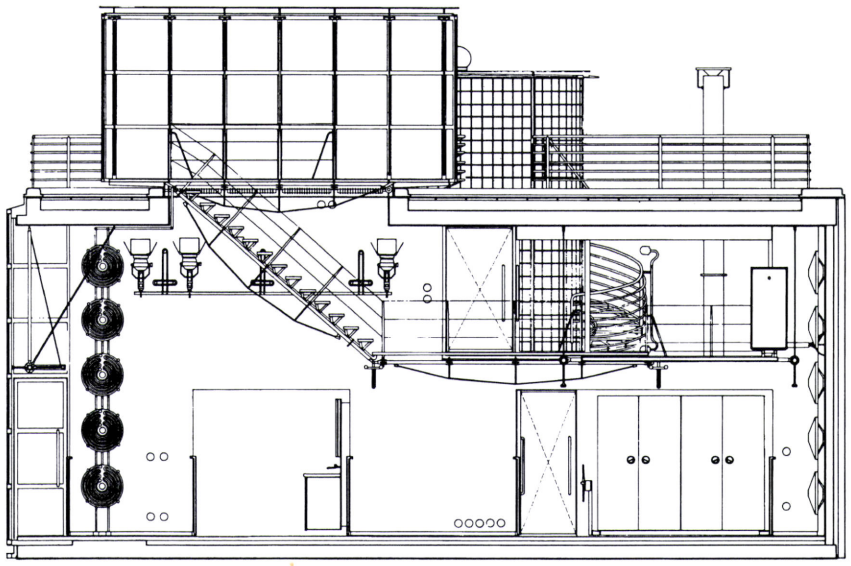
Externally, the apartment looks much the same as its neighbors, within a framework of brick and white steel balconies, though the specialist eye might notice that the two huge double-height windows require special reinforcement with a bow truss to provide stiffening. But though its scope is restricted, the apartment is much more than a piece of interior design. Young has immersed himself so deeply in the details that they have become full-scale architectural problems in their own right.

Young's version of architecture has nothing to do with creating sequences of spaces or devising elegant floor plans, with manipulating space to create a sense of progression or order. In essence, the apartment is based on three elements. The first is the presence of the river outside, which is allowed to fill the interior with views of a waterscape in two directions. The second is the sheer volume of open space inside. The third is the jewelry-like quality of the insertions that Young has scattered almost randomly across the interior.

There are very few signs of conventional domesticity here. All the normal necessities – bedroom, bathroom, kitchen – have been transformed into points of departure that give Young a chance to extemporize on the theme of functionalism.

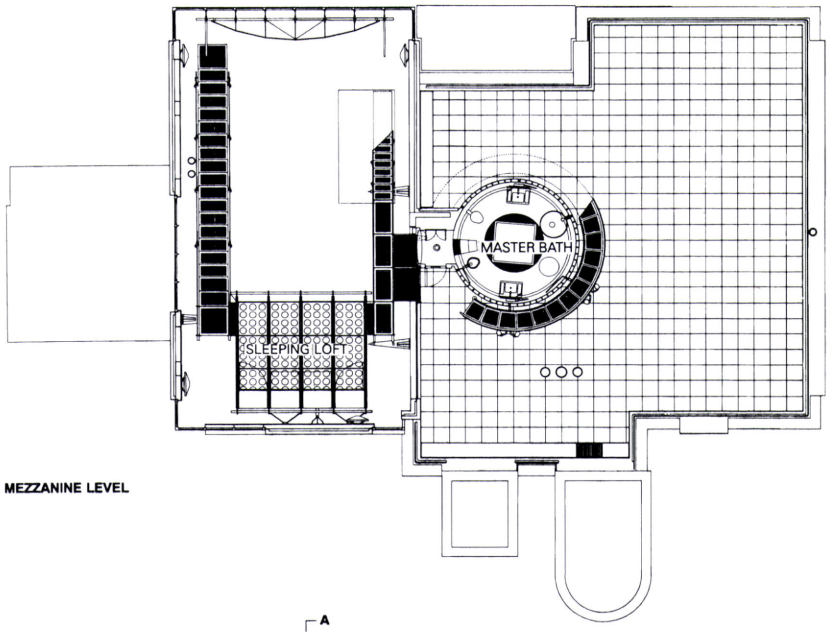
With its celebration of industrial imagery, Young's apartment has strong echoes of the Maison de Verre, but unlike Charreau's masterpiece, which so influenced Young's generation of architects, it is not a giant mechanism. Rather its polished plaster walls show off a collection of jewel-like artifacts, in a celebration of the intricacy of construction. This is a highly personal work, one that pushes private obsessions to their limits in a way which would discomfort some, but which is certainly exhilarating in its absence of compromise – and in its sheer bravado. **Deyan Sudjic** ■

The author is editor of Blueprint, *a monthly published in London, and has written several books on design. A new book,* The Hundred Mile City, *will be published this fall.*

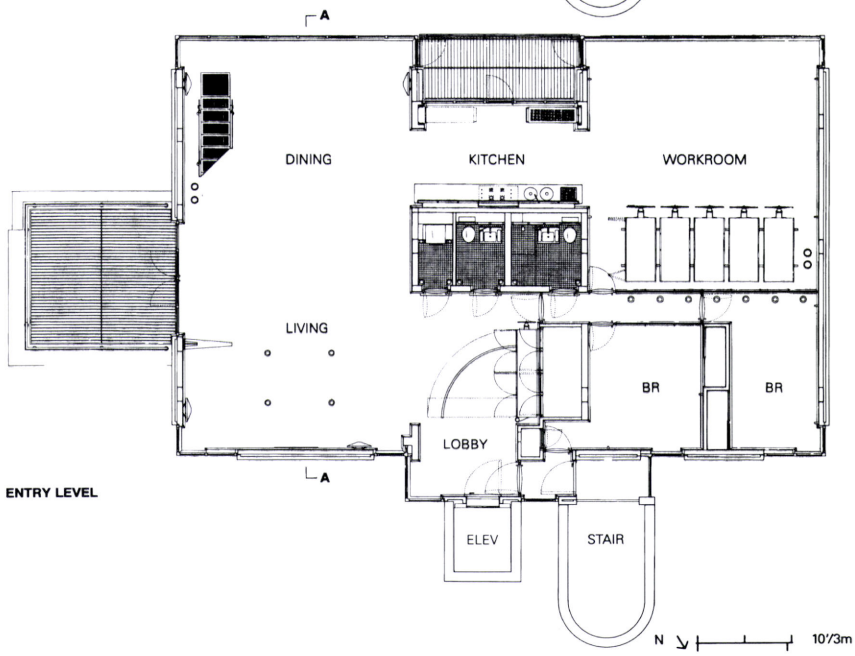


SECTION A-A

5'/1.5m

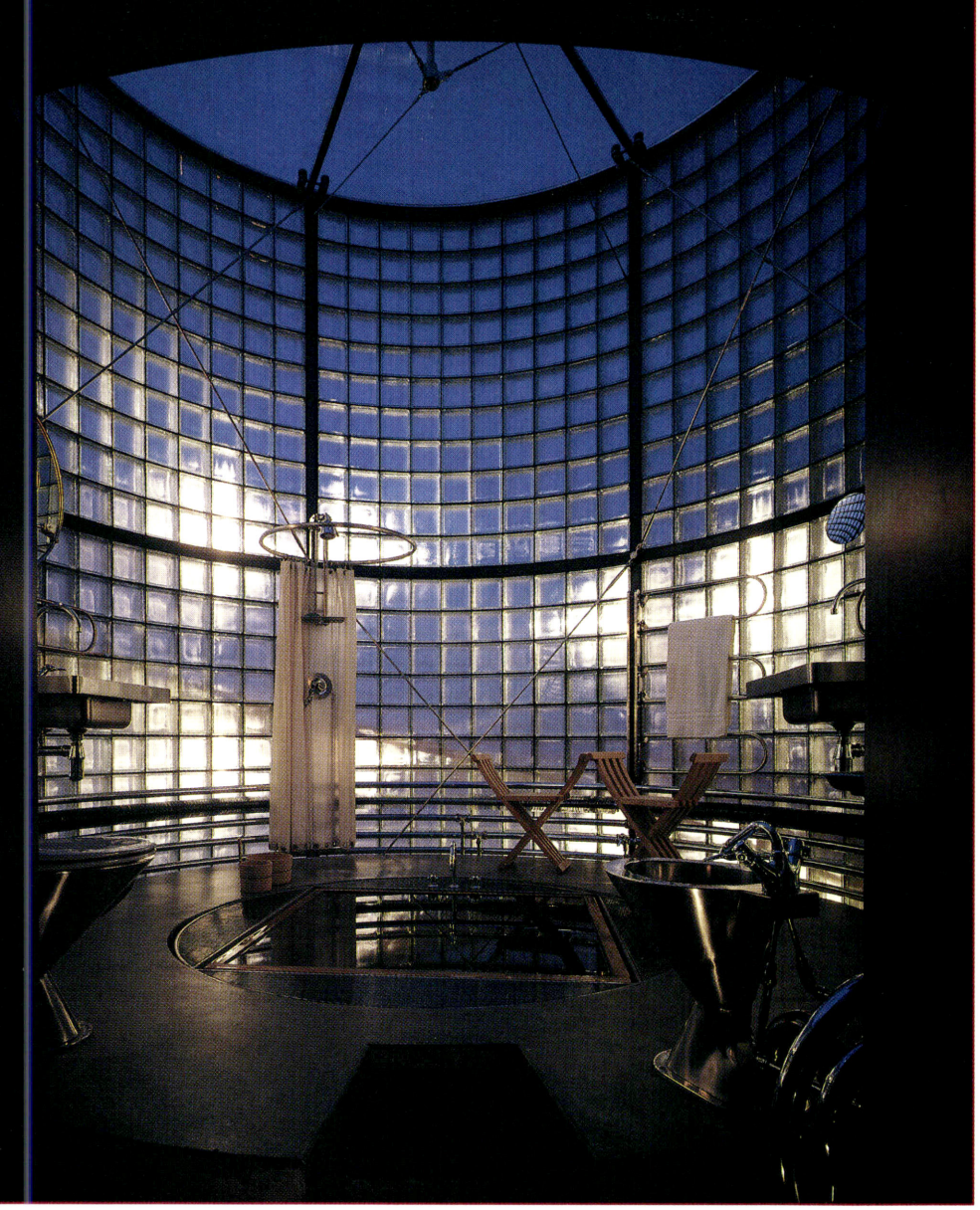


MEZZANINE LEVEL



ENTRY LEVEL

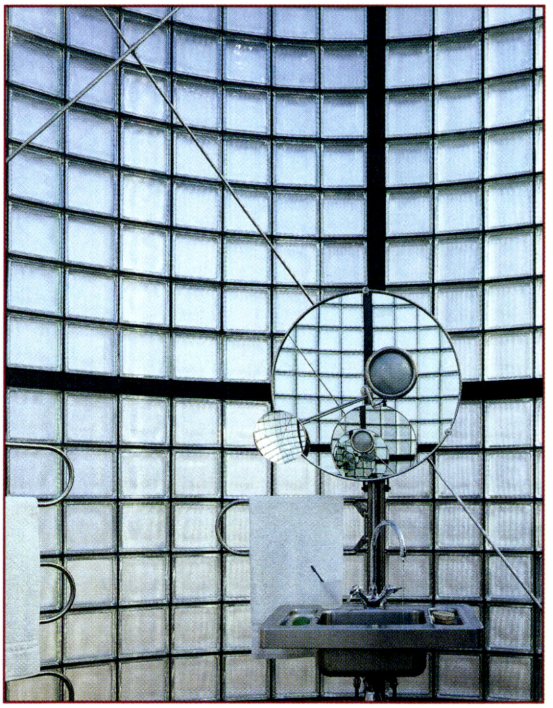
10'/3m



5



6



7



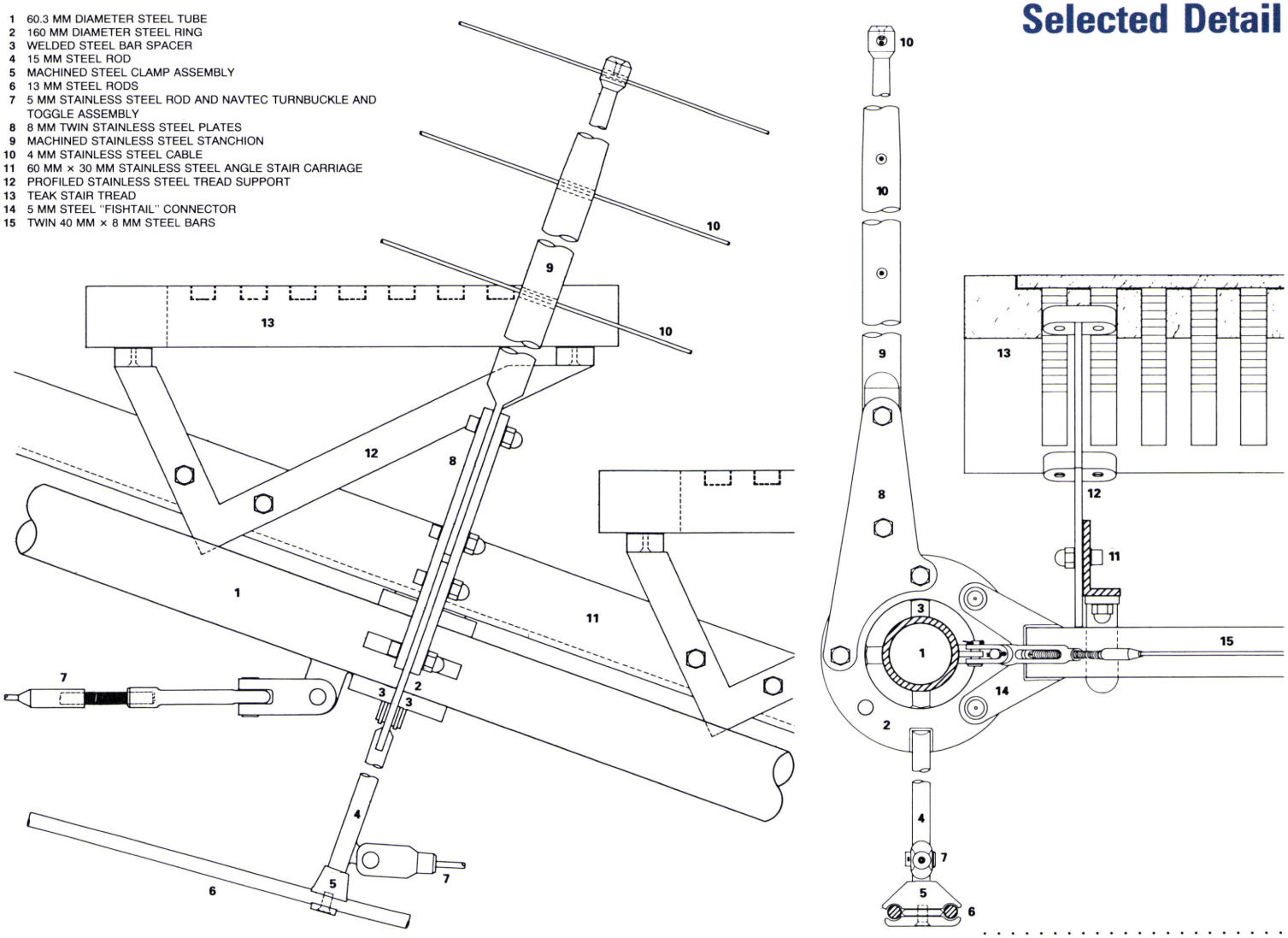
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In the workroom are mobile compact storage units (4) clad in moiré-patterned stainless steel. From the sleeping loft (6) a teak gangplank leads to a roof deck and to the round glass-block tower that forms the bathroom (5), with its sunken cedarwood tub centered under a clear glass roof. An Eileen Gray mirror is above each of the stainless basins (7). The glazed observatory on the upper roof (8) can be reached by an interior stair from the sleeping loft or by the outdoor spiral around the bathroom cylinder.

Project: *Young apartment, Hammersmith, London.*
Architect: *John Young (assisted by Peter Angrave and Amo Kalsi).*
Clients: *John Young and Marianne Just.*
Program: *top floor of apartment building designed by the Richard Rogers Partnership; about 325 sq m (3500 sq ft).*
Major materials: *concrete floors, beeswax finish; Spanish terracotta roof paving; polished plaster walls (includes marble dust, linseed oil); large windows aluminum framed, with top-hung sash; tubular steel stair framing; teak treads.*
Consultants: *Hay Barry & Partners (structural, building); Ove Arup & Partners (structural, special structures); The Sinnett Partnership (service engineering); Lighting Design Partnership (lighting). Melvyn Newell (quantity surveyor).*
General contractor: *Croudace Construction, Ltd.*
Cost: *not available.*
Photos: *Richard Bryant.*



1 60.3 MM DIAMETER STEEL TUBE
2 160 MM DIAMETER STEEL RING
3 WELDED STEEL BAR SPACER
4 15 MM STEEL ROD
5 MACHINED STEEL CLAMP ASSEMBLY
6 13 MM STEEL RODS
7 5 MM STAINLESS STEEL ROD AND NAVTEC TURNBUCKLE AND TOGGLE ASSEMBLY
8 8 MM TWIN STAINLESS STEEL PLATES
9 MACHINED STAINLESS STEEL STANCHION
10 4 MM STAINLESS STEEL CABLE
11 60 MM × 30 MM STAINLESS STEEL ANGLE STAIR CARRIAGE
12 PROFILED STAINLESS STEEL TREAD SUPPORT
13 TEAK STAIR TREAD
14 5 MM STEEL "FISHTAIL" CONNECTOR
15 TWIN 40 MM × 8 MM STEEL BARS



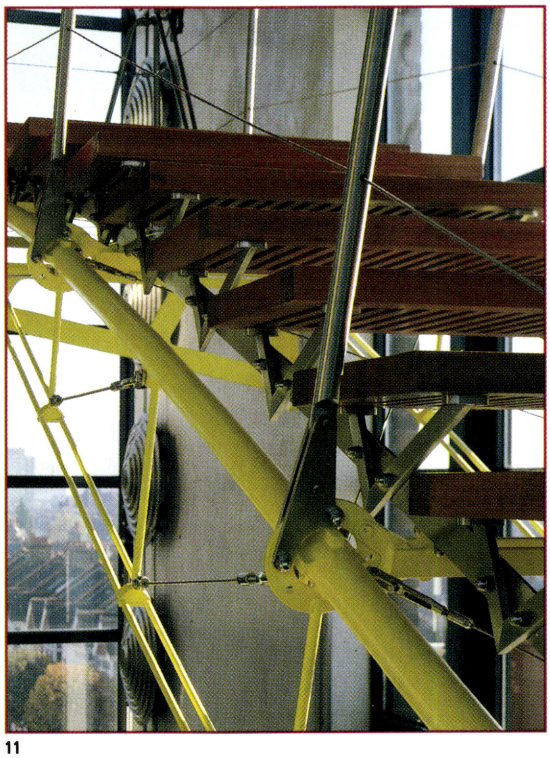
ELEVATION

4"/100 mm

CROSS SECTION



9 10



11

Selected Detail

Stair
Young Apartment, London

Trusses assembled of steel tubes and rods, painted fluorescent yellow, support the main stair to the sleeping loft (10, 11). Resting on these trusses is a stainless steel carriage, to which the teak stair treads are attached. A delicate balustrade of stainless cables and stanchions is consistent with the loft railing. The bow of the truss generates a variable tread to rise ratio, the stairs becoming almost horizontal near the top. At the bottom, the stair bears on small wheels, like those of a gangplank; a cantilevered platform eases the turn into the living area.

The "wind beam" that braces the curtain wall on the long side of the living room (9) is similarly assembled of steel tubes, rods, and turnbuckles. ■

Perspectives

With characteristic candor and pungency, **Wolf D. Prix** speaks out on **Coop Himmelblau**'s approach to urban design, and Vienna's architecture of neurosis.

Interview: Wolf D. Prix

Since its founding in Vienna in 1968, Coop Himmelblau has become widely known for its iconoclastic, psychographic approach to architecture. Now, with offices in Vienna and Los Angeles, partners Wolf D. Prix and Helmut Swiczinsky have expanded their practice into the arena of urban design. Senior editor Ziva Freiman caught up with Prix in January when the partners came to New York to accept a P/A Award for the Open House (Jan. 1991, p. 85).

P/A: Can you give us some background on your new town design in France?

WP: You are talking about Melun-Sénart. In 1986, we were in Vienna, and we had about five or six jobs – restaurants, small offices. . . We feared that we were losing the scale. If you're always doing interiors, you lose the scale of the city. We were happy to get invitations to take part in two competitions, one was the big [Ronacher] theater in Vienna and the other was the city planning project for Melun-Sénart [on the southern edge of Paris]. We threw away the commissions we had and said, "This is it; let's do it." And we won both.

P/A: How did you approach the urban design?

WP: We tried several things: One was that we were developing a certain design procedure that came from a very specific approach to architecture, and at this time we became very interested in translating our body language into architecture, which sounds crazy at the first moment, but it was a very consequential step. The other thing was our concept of open architecture, and how we could translate it or transform it into a city planning project on a big scale.

We tried not to analyze, but to collect our emotional responses to the city: Do we like cities? Which cities do we like? Why do we like them? And it turned out that we are intrigued by several cities: Vienna, because of the quality of living; New York, because of the immense density and excitement, its "neurotic waves"; and L.A., because of the non-physical, the invisible power of the city. And we said, "Okay, what do we like in our life?" This is variety. So why don't we combine the advantages and disadvantages, mix it up, and create a city which is like life.

We did a lot of sketches, trying to define in a very abstract, psychological, psychoanalytical way the variety of the city, hot and cold and loud and quiet and fast and slow and white and black. Playing around with this emotional quality of the city. On the other hand, we "proved" the program. It means, "Okay, there must be a university, where is the best place for that," and so on.



Gerald Zugmann

Wolf Prix, left, and Helmut Swiczinsky.

"... To create new situations in cities ... is desperately necessary. We can't get along with the old Camillo Sitte clichés anymore."

WP: Right. We had a lot of drawings about hot and cold cities, and fast and slow cities, and things like that. This was where the body language came in. We'd ask, "How can it be? A city should be like an embrace," [gesticulating] and I would show it to Helmut. This was the best working model – body language – because he immediately understood and developed the next one. . . Then we made [the model] reasonable.

P/A: Who is the client, what was the program?

WP: A regional planning committee was in charge of organizing the competition. There were three villages. The goal was to create a center that would connect those villages.

P/A: What is the status of the project?

WP: As far as we know right now, they are waiting for political change. Paris is trying to enlarge her boundaries for economic and political reasons and until this is done the project is on hold. The funny thing is that we are not depending any more on this project because we won, with the same concept of variety and combination of discrepancies, another city planning project close to Vienna, which is a developer project that is going to be built because banks are behind it. Here the program was to do a mixed-used service center, from apartments to shops, in the midst of an existing fabric.

P/A: So this is an entrepreneurial venture.

WP: Yes. I think if we can get through this, and I am sure we can, then our city planning concept will be more tangible.

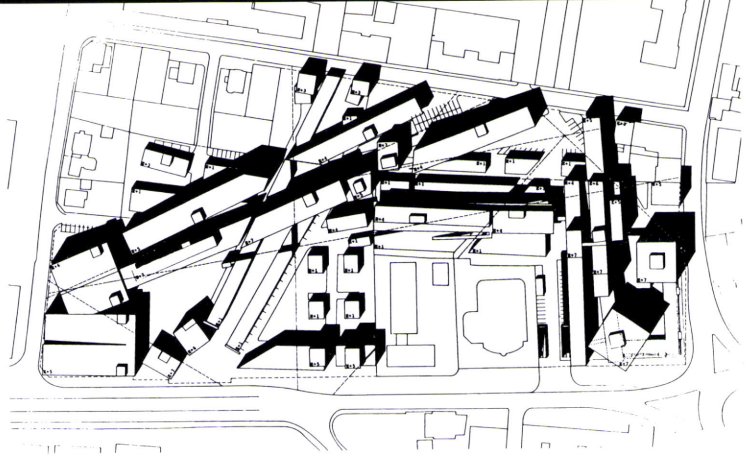
Our design philosophy is that we always support the weaker part in our design. So while the old school of architecture rules that the strong part is the strong part, and this is the second, and this is the third – hierarchy – we don't have hierarchies in our architectural language. We have variety. That means sometimes that the weak, the small, part cuts the strong part, which is impossible in new Classicism.

P/A: Or in any orthodox school of design.

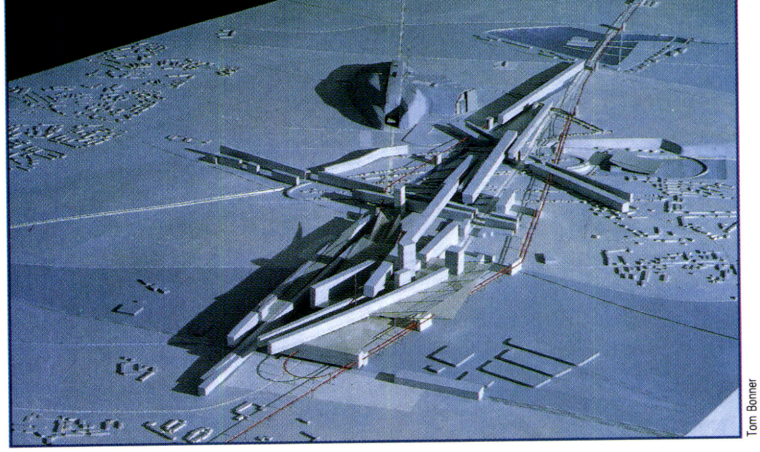
WP: Because they want to have hierarchies, because they can't think complex. They have to think additive. One plus one is two, and two plus one is three. It's not true.

P/A: But on a grand urban scale I think it's a le-





1



Tom Bonner

2

Urban design scheme for Europaplatz St. Pölten (1), a three-phase, 15-million-sq-ft mixed-use city center projected for St. Pölten, the provincial capital of Lower Austria. A model of the urban design scheme for Melun-Sénart (2), a projected city core linking three villages on the outskirts of Paris.

States is the separation of city planning and building. Who said that a good architect can work from the smallest to the biggest scale?

P/A: Van de Velde.

WP: Yeah, right. If Helmut and I and now Frank Stepper are working together, this is polyphonic; this has nothing to do with complexity. For us complexity is to bring more than architectural thinking into a project.

P/A: In very big urban design projects program can be problematic because you can't manufacture the life of a city by listing functions. You, who speak of open architecture, might be able to overcome a program-oriented mindset.

WP: This is the task we are working on right now. One problem is that people always try or intend to fill up everything with program because they are afraid of an empty space. In this open space something can happen which we can't control, so developers are always afraid of it. They say it costs too much. We try to interweave two concepts, the developer city and the parasite city. "Developer city" means making money out of volumes. This is okay because you need offices and things like that. But in order to live in a city people must have the possibility to create their own spaces, without codes and rules.

P/A: Spaces for ad hoc activity.

WP: Yes. This I think, would give a city the variety we are thinking of. This is the parasite city: Using existing structures and transforming [them] like parasites using the host to live. I can imagine this as a perfect thing to remodel old structures. What we did for Berlin, a recent project, is a combination of both. We need money-yielding volumes, which have a high density in order to get "life" into the city, but, on the other hand, we need open structures which could be used and transformed by the people. Both, together, seem to us a very reasonable way to create new situations in cities, which is desperately necessary. We can't get along with the old Camillo Sitte clichés anymore.

P/A: In the end, architecture has to take physical form. How is this variety expressed?

WP: We can imagine that we could build a city, or part of a city, with different landscapes, like a mountain range, a desert, a lake, an ocean, a beach, and let people decide where they want to live. . . Of course, I don't mean that literally. What we are doing right now is comparing streets of New York with streets of Vienna. We combine them; just take 7th Street and Mariahilfestrasse, and we'll see what will come out.

"I always can see and smell soldiers marching, troops moving, when I look at Classicist columns."

"For us complexity is to bring more than architectural thinking into a project."

P/A: This is fascinating. What you're saying isn't so different from what Aldo Rossi talks about in that you, too, have an inventory of spatial sequences, or sections, that invoke certain feelings. The forms, the materials, might be completely different, but it's still some kind of memory.

WP: We are very similar in words, and I have to admit, I appreciate Rossi very much since I saw the hotel in Fukuoka [P/A, May 1990, p. 112]. I like the power of it, which is a little suspicious to us. Rob Krier sometimes says the same things we do. The words are similar, but he means another thing than what we're talking about.

That leads me to the point of what we believe in architecture. It is that the architect, his hand, his head, and his attitude are expressed in three-dimensional structures. You can't separate society from architecture, nor the architect from society. I think architects should learn a bit more about looking behind the things and not being [seduced] by façades. For example, I never could appreciate Roman architecture. We were educated in a very Classicist way, we had to draw everything. I don't know why, I had a kind of *Hemmung,* [an inhibition]. I refused to do it, and later on, I found the point. In high school we learned that Caesar was a hero and the Romans very civilized. But if you read closer you see that Caesar killed about 30,000 people in one campaign and he burned the library at Alexandria [in the course of a siege. The library's destruction was completed by the emperors Aurelian and Theodosius I]. Since then I always can see and smell soldiers marching, troops moving, when I look at Classicist columns. . . We are looking for life-affirming architecture. It has a lot to do with structure and nothing to do with silly discipline.

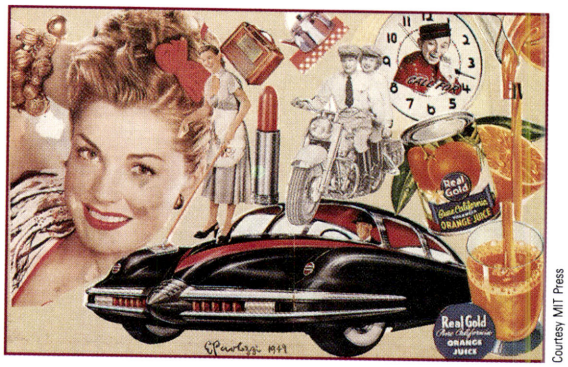
P/A: And it has a lot to do with communication.

WP: Right. We don't avoid conflict; we show it, and I think it's very healthful. Suppression makes Classicist architecture, which in our point of view is very, very dangerous. I want to see lively life around me, not military hierarchy. I really don't like the word axis, I really don't like the word hierarchy. I rather prefer tangents and vectors which are dynamic and open.

(continued on page 178)

Two essays examine all but forgotten 20th-Century movements.

In the first, **Morris Newman** finds new relevance in a retrospective of Britain's Independent Group.



Courtesy MIT Press

Real Gold *(collage on paper) by Eduardo Paolozzi, 1949, from* The Independent Group: Postwar Britain and the Aesthetics of Plenty *(MIT Press, 1990).*

The Independent Group – Revels in Pop

The young English men and women of the 1950s presented in the show "The Independent Group: Postwar Britain and the Aesthetics of Plenty," may seem an obscure footnote in postwar art history. On view at the Albright/Knox Gallery in Buffalo through November 3, their discoveries may be more pertinent now than they were in the days of Elvis and Eisenhower. These young artists and architects, in exhibits like "This is Tomorrow" of 1956, "discovered" pop culture and proposed a meeting of "official" high culture and the vernacular. While some American observers have seen no more in this show than the first stirrings of Pop Art, the Independent Group has new importance for us at a particularly rudderless moment in architecture.

Its formal name notwithstanding, the IG was a casual circle of younger members of London's Institute of Contemporary Arts, including some of today's most renowned figures: architects Peter and Alison Smithson, James Stirling, and Geoffrey Holroyd; artists Richard Hamilton and Eduardo Paolozzi; and critics Lawrence Alloway and the late Reyner Banham. In the austerity and conservatism of postwar Britain, few IG architects could find steady work; as Alison Smithson tartly reminisced, "Permission to build was withheld." Instead of buildings, their product was brilliant exhibits – a ferment of American popular culture, science fiction, cybernetics, Jean Dubuffet, Charles Eames, and New Brutalism. Images of primitive art, X-rays, and aerial photographs assaulted the viewer.

Although the IG admired the first generation of Modernists, they differed from them in their frank acknowledgment of the realities of urban life and in their interest in the indecently cheerful world of pop, sci-fi, and other manifestations of "unofficial" culture. "Gropius wrote a book on grain silos, Le Corbusier one on aeroplanes . . . but today we collect ads," wrote Alison Smithson in 1956.

America must have seemed exotic to 1950s London, ravaged by war and subject to food rationing. The young Britons were astonished by the cheerful vulgarity, opulent color, and futuristic optimism of American magazines. They adopted American pop as the battering ram with which to assault the British cultural establishment. Not all IG members were comfortable with the notion of the Americanization of Europe, but they believed that the wave was unstoppable.

"... More pertinent now than they were in the days of Elvis and Eisenhower... the Independent Group has new importance for us at a particularly rudderless moment in architecture."

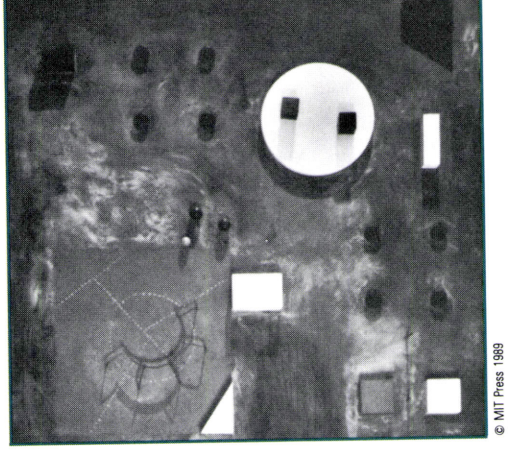
Beyond American pop, the young Britons looked closely at their own urban environments. The photographer Nigel Henderson documented the working poor of London's Bethnal Green district; the Smithsons incorporated some of his gray and gritty images into their drawings and manifestoes. While the Smithsons championed Corbu and Mies (whose following in England was slight at the time), they rejected their precursors' idealized notions of the city and its underlying pursuit of Classical order. Banham, who came to prominence as the polemicist of the IG, claimed that his colleagues strove for realism and human values rather than for purely formal beauty. He said of New Brutalism: "If it is architecture in the grand sense of Le Corbusier's definition, is also architecture of our time and not of his. . . "

If the IG's take on pop culture caught fire in the visual arts, it did not do the same in architecture. In a recent interview, Mrs. Smithson blamed Britain's "aesthetic control" boards of the 1960s and 1970s for stymying further exploration into the architecture of everyday life. Nevertheless, Denise Scott Brown sees traces of the IG and the New Brutalists in the "pop-zoom visions" of Archigram. Scott Brown (who studied in London in the 1950s) and her collaborator Robert Venturi may both owe a debt to the IG for their sense of realism, their willingness to work with vernacular iconography, and their belief that the American streetscape is "almost all right."

In America, pop and vernacular architecture are still inexplicably neglected sources for architecture. That's a supreme irony at a time when many in the profession are burbling about "meaning" in architecture and yet refuse to work with the symbols and meanings that permeate our culture. Although Post-Modernism claimed to be a return to "history," it reduced the archetypes of architectural history to billboards, without regard to a building's meaning, technology, or use. Now that the diversion of Post-Modernism seems to have passed, the legacy of Independent Group is resurfacing, demanding that we look to our own culture and circumstance for inspiration. Even 35 years later, the timing could not be better. **Morris Newman** ■

The author, P/A's correspondent in Los Angeles, is Senior Editor of California Planning & Development Report.

Ross Miller describes a little-known avant-garde movement whose ideas and actions offer a way out of the profession's current crisis of belief.


© MIT Press 1989

Environment for Play, 1956, one of Constant's "model precincts" and part of his design for an experimental Utopian city with changing zones for free play, where nomadic inhabitants could collectively determine the nature of their environment.

The Situationists: Resurrecting the Avant-Garde

The whole profession – from large corporate practices to the architectural avant-garde – is facing a crisis of belief that will determine what Modern architecture comes to represent. How did this crisis come about, and what might it lead to? A recent show at The Institute of Contemporary Art in Boston on The Situationist International, a little-known group of artists and architects working mainly in France from the late 1950s through the 1960s, underscores some of the causes of the current crisis and suggests some answers to it. The show catalog, *On the Passage of a Few People through a Rather Brief Moment in Time: The Situationist International, 1957–1972,* available from MIT Press, discusses the Situationists' central belief that ours had become a "society of the spectacle," which we now see has become particularly threatening to architecture.

The last ten years of no-money-down land deals, banking schemes, and corporate raiding have been hard on architectural firms that expanded wildly to accommodate a whiggish expectation of never-ending good times. Many architects in the largest offices, who profited from the recent building frenzy, have now gotten pink slips, while their firms are threatened with bankruptcy. Those who blithely participated in the gluttony of the central business districts, through their design of redundant malls and glitzy monoliths, are now the glut's most recent victims. Mega-blocks of gigantic structures threaten, along with homelessness and peripatetic crime, the health of the core city streets. In the past decade, in other words, architects have not led, as they like to think, but served.

The progressive trivialization of corporate architecture has had its equally compromising corollary in the co-opting of "radical" architects such as Frank Gehry, Peter Eisenman, Rem Koolhaas, and Bernard Tschumi. Having made their reputation with architecture as a form of cultural criticism, these architects are now themselves being lured to the center by a nostalgia in our society for the revolutionary and radically anti-nostalgic art of generations past.

An example of this was the "Deconstructivist Architecture" show at the Museum of Modern Art in 1988 (P/A, August 1988, p. 25), which employed a clever sort of revisionism to insinuate the current work of these and other well-known conceptual architects into a romanticized revolutionary movement of the past: Constructivism. What the show proved is that the processing through a museum of any politically motivated architecture, such as Constructivism, tends to aestheticize the content, flattening critical differences into matters of style. The genial museum world is fatal to the most problematic and challenging contemporary work, particularly architecture. What is appropriately marginal is invariably suffocated by acceptance and robbed of what Walter Benjamin called its aura.

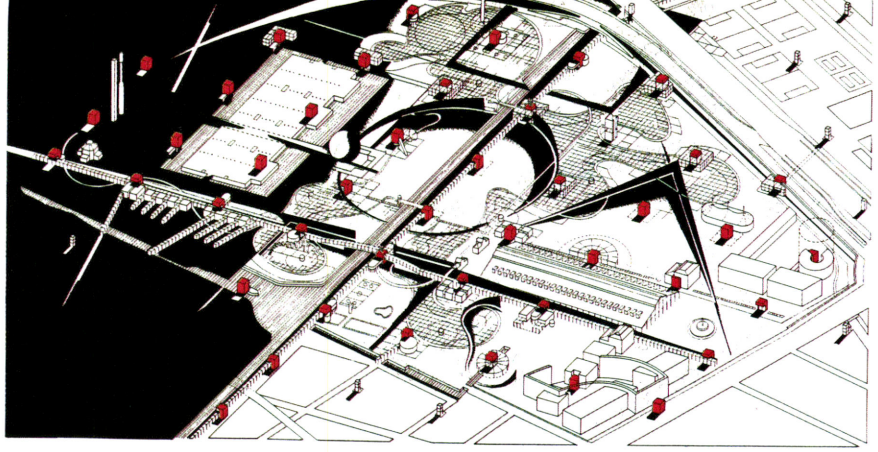
"... The architectural profession might [learn] from the Situationists and dedicate itself to investigating the liberating and life-giving potential of our places of work and play..."

The Situationist International, which involved architects and urban theorists from its earliest days, sought to recover the sting of avant-garde art and to break the monopoly of political discussion held by the post-war technocrats, "experts," and professional radicals. They wanted, says critic Elisabeth Sussman, to change our "society of spectacle," by "converting art from a precious consumable object to a principle permeating daily life (which) would take place in quotidian, everyday uses of the city and its buildings."

Unlike Communists and other political radicals of the period, Situationists had no interest in social perfection. As Bohemian anarchists, they made a fetish of their refusal to agree. Nevertheless, they had certain methods in common. One of these was *détournement* (diversion), which took objects and images from the environment out of their original context and recontextualized them through juxtaposition and realignment. Examples of artistic work in this vein include Giuseppe Pinot-Gallizio's "Industrial Paintings," rolled out like patterned paper toweling and sold by the yard, and Asger Jorn's *objets d'art* bought by the gross in flea markets and "improved" by the artist. These works resisted commodification through their refusal to become scarce.

Other Situationist methods particularly relevant to architecture and urbanism included *dérive* (drift), which was a "mode of experimental behavior" that involved meandering or drifting through cities; psychogeography, which looked at the effects of the geographical environment on people's emotions and behavior; and unitary urbanism, which sought to set up within existing cities, "bases for an experimental life."

Two architects and theorists, Guy Debord and Constant used these methods in various ways. By



General axonometric view of Bernard Tschumi's schematic design for the Parc de La Villette, depicting the superposition of points (follies), lines (axes and meandering paths), and surfaces (paved, grassy areas).

recording how people "drift" through the obsessively right-angled order of the grid, Constant personally assaulted the universal order of existing urban plans and attacked the certainty and self-seriousness of Le Corbusier and Mies with their "modern" notions of the way people should live. Constant and Debord also subverted the way these right-angled divisions of the land are extruded vertically into towers for the convenience of speculators. Constant's "Labyratoire" (1962), for example, imposes a geometry of acute angles over these supposedly rational geometries of the city and produces a new rationally supportable mock order of its own.

Constant also mapped the city by tracking individuals as they negotiated their way around a familiar network of streets. His maps did not record day-to-day passage, for example, to and from the office, marked by roads and bus routes, but a *dérive* or meandering in the spaces between "important" destinations. Mocking big-time planning and autocratic architects, Constant and Debord planned in the idea of randomness. The left-wing notion of social hygiene, with its romance of white-boxed workers' quarters, as well as the right wing's love of imperial order, of great axial roads leading to ceremonial centers that celebrated power, were equally undermined.

Although, until recently, the Situationist International was a nearly forgotten movement, it seems to have had an almost subliminal influence on architects and urbanists in the U.S. Constant's "Yellow Sector" (1958) and "Hanging Sector" (1960) building projects, with their large floating roofs supported by trusses or hung from masts by cables, were realized decades later in stunningly similar versions by mainstream architects. Chicago's McCormick Place, designed by Gene Summers and Helmut Jahn (of C.F. Murphy Associates), and its later annex by SOM, both monuments to trade, are eerie testimonials to the power of this anti-property anarchist's formal work. Likewise, Constant and Debord's tracking of people's meanderings through space prefigures Lawrence Halprin's 1960s ideas of urban choreography.

Bernard Tschumi, now Dean of Columbia University's School of Architecture, is one of the few architects who acknowledges his debt to the Situationists, viewing them as "allies of another time." His work at the Parc de la Villette, in the northeast corner of Paris (P/A November 1989, p. 65), a 125-acre site previously occupied by the city's central slaughter houses, employs the Situationist ideas of *détournement*, rupturing and realigning elements drawn from the immediate surroundings and from historical avant-garde work, and *dérive*, tracking the way people drift within orthogonal grids. With La Villette's radical juxtaposition of colorful and playful Constructivist forms against the barren industrial landscape, Tschumi suggests a way of reclaiming the soul of the old working-class cities systematically assaulted for over a century by master planners like Haussmann, Burnham, Moses, and Le Corbusier. By giving it close architectural attention, a discarded and derelict place is treated with the same obsessive care formerly given to the old aristocratic core of Paris. In this way, the margin is shifted to the center: The worst of places become the best, not for the purpose of further development and speculation, as in gentrifying transformations of former working-class areas like Soho and Tribeca in New York, but to revive the juxtapositions and hard edge of urban working-class neighborhoods. For Tschumi, his "project is motivated by the fact that the site is not 'virgin land,' but is located in a populated semi-industrial quarter."

"The Situationists [believed] that ours had become a 'society of the spectacle,' which we now see has become particularly threatening to architecture."

Peter Eisenman, with his Wexner Center at Ohio State University (P/A, October 1989, p. 68) has built something of a *détournement* or diversion himself. Here, a challenging modern architecture attempts not to convert or reform, but to insinuate itself, like a virus, into the existing urban fabric. It is not seen in opposition to, but aggressively alive within, the existing order of the city. In this way, it recalls the Situationist idea of unitary urbanism, which would carve out of the existing fabric of the city places in which a more experimental way of living could occur.

Despite their inclusion in MOMA's Deconstructivist show, Tschumi and Eisenman have shown, with this work, that they are not nostalgic about the avant-garde of the past, but look to it for a model of practice that is more concerned with building than polemic. During the long days of the current recession, when we have extra time to reflect, the architectural profession might consider the lessons to be learned from the Situationists and dedicate itself to investigating the liberating and life-giving potential of our places of work and play, rather than continuing in the mindless glorification of wealth. **Ross Miller** ■

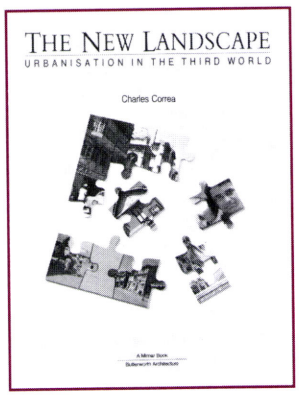
The author has written American Apocalypse: The Great Fire and the Myth of Chicago *(The University of Chicago Press, 1990) and is a frequent contributor to P/A.*

India: Fair Ground for Modernism?

Books

William J.R. Curtis writes that India's culture is more pluralistic than often thought;

Modernism is but one part of its rich heritage.



The New Landscape: Urbanisation in the Third World *by Charles Correa, a Mimar Book, Butterworth Architecture, Stoneham, Massachusetts, 1989, 120 pp., illus., paper, $24.95.*

The Indian Metropolis: A View Toward the West *by Norma Evenson, Yale University Press, New Haven, 1989, 294 pp., illus., $50.*

The Tradition of Indian Architecture: Continuity, Change, and the Politics of Style since 1850 *by G.H.R. Tillotson, Yale University Press, New Haven, 1989, 166 pp., illus., $25.*

India presents special opportunities and problems to the architectural historian. It is one of those rare places of fundamental invention in world history where several major systems of belief have been given symbolic shape in buildings. Given the diversity of cultures – Buddhist, Jain, Hindu, Moslem and others – and the range of different regions, climates, invasions, and influences, it is understandable that some might shrink from the very idea of an "Indian" architecture at all. For the concept "India" is relatively recent and it blurs the distinctions between previous dynasties and empires.

Only a decade ago it was practically impossible to find books of any value on the history of Indian architecture after the decline of the Moguls in the 18th Century. Since then there have been several creditable studies on British colonial architecture and even on the Modern architecture that has emerged since independence in 1947. To examine Indian buildings and cities of the past two centuries is to come face-to-face automatically with the impact of Western ideas, forms, technologies, institutions, and ways of life. It is also to confront the intertwined processes of colonization, modernization, and urbanization.

Norma Evenson's *The Indian Metropolis: A View Toward the West* takes four cities which owed their existence and growth to the economic and political exploitation of India by British Imperialism: Madras, Bombay, Calcutta, and New Delhi. A city is a phenomenon of incredible complexity, and Evenson tries to weave together topography, economics, social structure, public space, monumental architecture, ordinary buildings, and squatter settlements in her study. She moves back and forth between the lives of different social classes, always with a sharp eye for the contrast between colonizer and colonized. She also sees the city as an instrument for the cross-fertilization of ideas and cultures. In a loose way this is a study in comparative urbanism, but in this respect it is more episodic than systematic. It could probably have gained from a conclusion that pulled all the loose ends together and sketched the larger shape of the phenomenon of the colonial city itself.

The emphasis is upon the relationship between people and buildings and Evenson introduces a vast range of sources to serve these views. Photographs are self-consciously in-artistic, and evoke the clamor, confusion, and poverty of the Indian urban scene. Evenson does not hesitate to inject her own judgments from time to time. For example, she castigates the New Delhi plan for its lack of attention to transport and criticizes those she calls "high art designers," i.e., recent Indian architects of note, such as Charles Correa or Raj Rewal, who have developed a sort of "regional strand" of Modern architecture in which certain principles of the past have been translated into a new form. Here Evenson seems to lower the tone of her book by delivering an unbalanced harangue. Correa, for example, is virtually dismissed in his claims for "Indian architectural identity," and is referred to as someone who has secured himself a place "in the community of world-class architects suffering from chronic jet lag."

As sometimes happens when an author has an axe to grind, the long-range value of a book may be slightly depleted, in this case, by an over-simple opposition between "high" and "low" architecture. Her final chapter "The Architecture of Independence" departs from the broad urban panorama that she has up to then sketched, but it still remains within the confines of the four cities that are her main theme. Since Madras and Calcutta have given rather little to Modern architecture, this

(continued on page 181)

Books of Note

Carlo Scarpa and the Castelvecchio *by Richard Murphy, Butterworth Architecture, Stoneham, Massachusetts, 1990, 197 pp., illus., $95.*
Scarpa's sketches, paired with photos and new record drawings, document his sensitive interventions on this Verona museum.

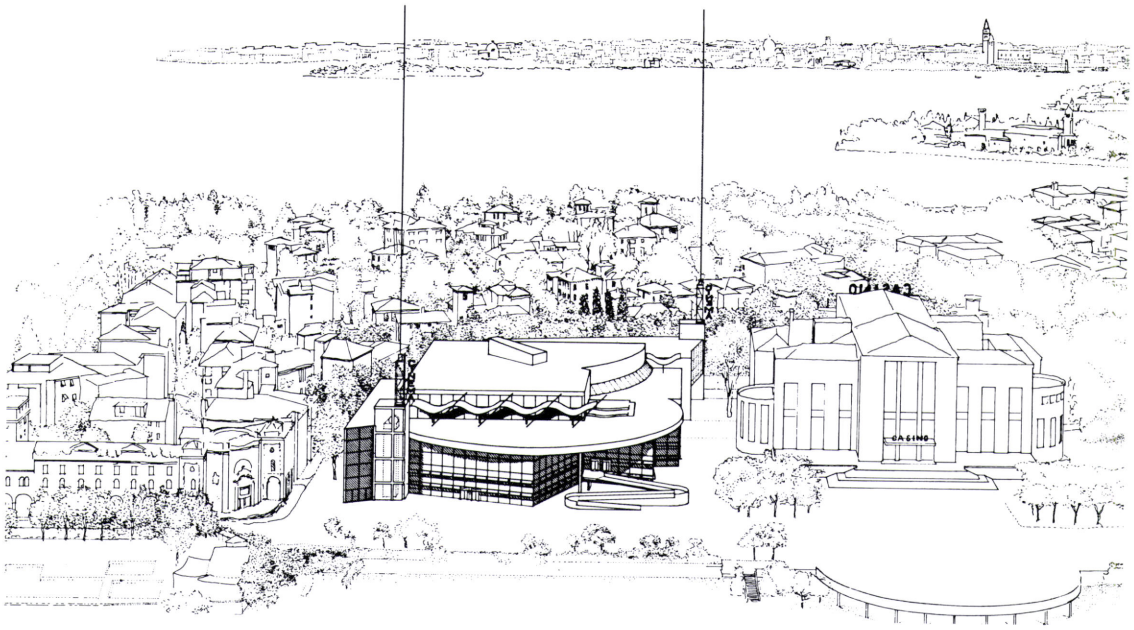
Houses by Bart Prince: An American Architecture for the Continuous Present *by Christopher Mead, University of New Mexico Press, Albuquerque, 1991, 100 pp., illus., $29.95 cloth, $17.95 paper.*
Prince's exuberant designs, heirs to the organic approach of Wright and Goff, challenge our assumptions about regionalism and architectural propriety.

Contemporary Indian Architecture After the Masters *by Vikram Bhatt and Peter Scriver, University of Washington Press, Seattle, 1990, 221 pp., illus., $45.*
Le Corbusier, Kahn, and the British are the points of departure for 52 buildings and projects; the authors discuss India's modern aspirations as well as its economic underdevelopment.

Formal Structure in Indian Architecture *by Klaus Herdeg, Rizzoli, New York, 1990, 53 pp. illus., $35.*
Photographs and drawings reveal the beauty and logic of the Hindu and Islamic legacy in northern and western India. A sequel covers the Islamic architecture of Iran and Turkistan.

Projects A Film Palace on the Lido

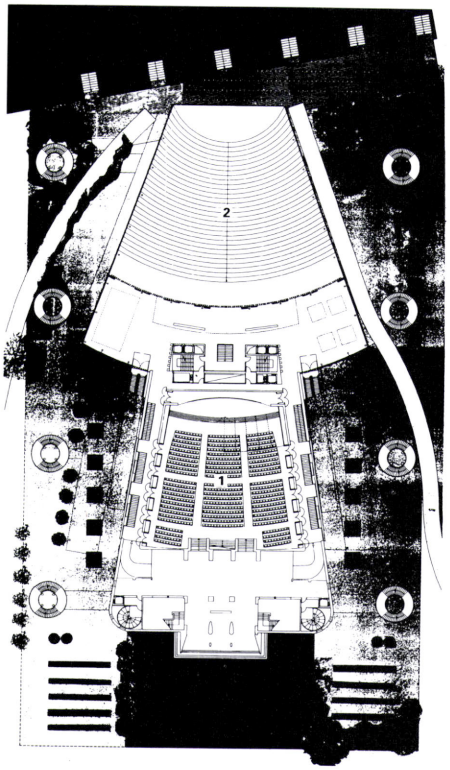
How does one address the cinema, the city of Venice, and Italian architecture of the 1930s? Ten architects' responses are on exhibit at the Biennale, now under way.



MARLIES HENTRUP & NORBERT HEYERS IN ASSOCIATION WITH JAMES STIRLING, PERSPECTIVE OF CINEMA PALACE, PIAZZA SIDE IN FOREGROUND

In 1989 the Settore Architettura of the Venice Biennale invited 12 architectural teams to design an extraordinary project: a new home for the Venice Film Festival on the Lido. Ten replied with comprehensive submittals and provided a startling array of responses to this most modern of programs. The entries have already been published in a handsome catalog (in Italian) published by Electa; they are also part of a broad slate of exhibits in the 1991 Biennale that opens this month. Under the Biennale's aegis, a winner will be chosen by a jury headed by Francesco Dal Co and including Kurt Forster, Arata Isozaki, Gianluigi Rondi, and Manfredo Tafuri. Their task will not be easy.

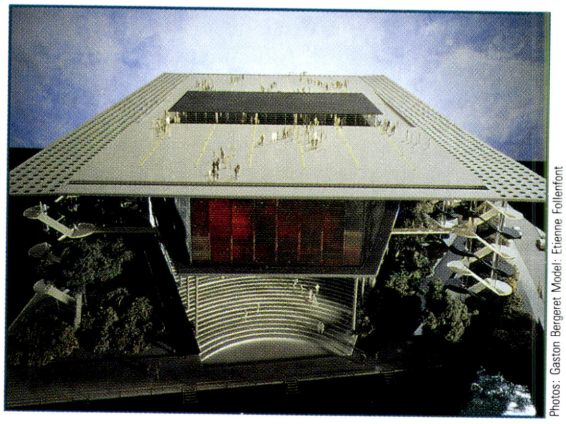
The site is extraordinary. Competitors were given the choice of expanding or replacing the existing Palazzo del Cinema of 1937, built by Luigi Quagliati as part of an unfinished entertainment precinct intended to revitalize the Lido. Quagliati's building was to have been one of a pair of mirror-image *palazzi* flanking Eugenio Miozzi's Casino, all three buildings to be executed in a stripped-Classical Fascist Moderne. But the Palazzo del Cinema's twin was never built. In 1952, Quagliati proposed a substantial expansion of the Palazzo, large



JEAN NOUVEL CINEMA PALACE, FIRST FLOOR PLAN N ↗ 40'/12m

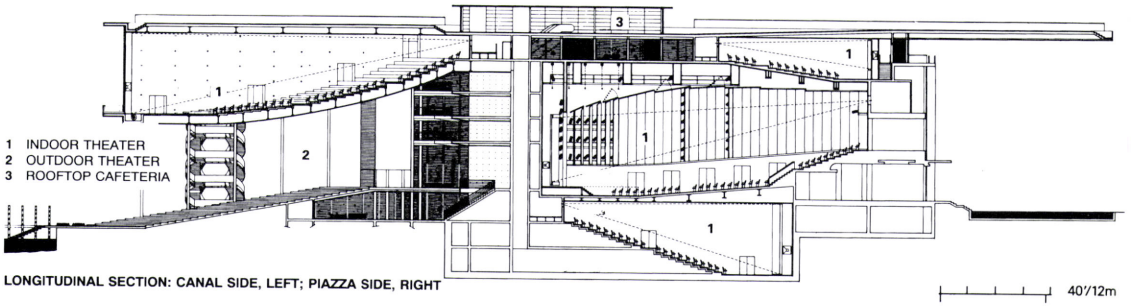


MODEL OF CINEMA PALACE, PIAZZA SIDE



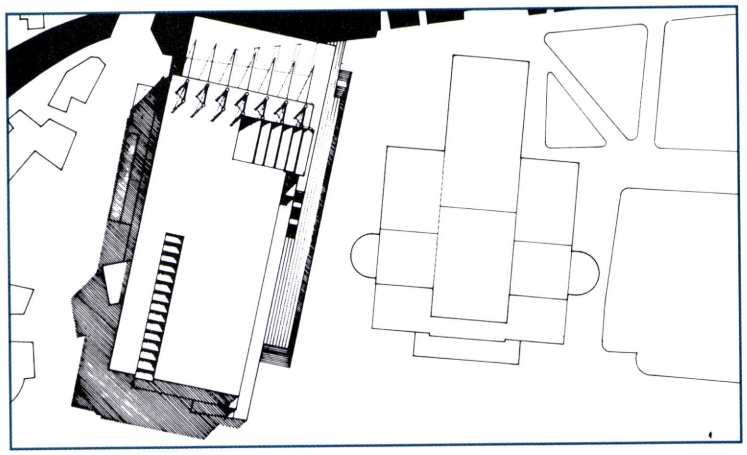
MODEL OF CINEMA PALACE, CANAL SIDE

Photos: Gaston Bergeret Model: Etienne Follenfont

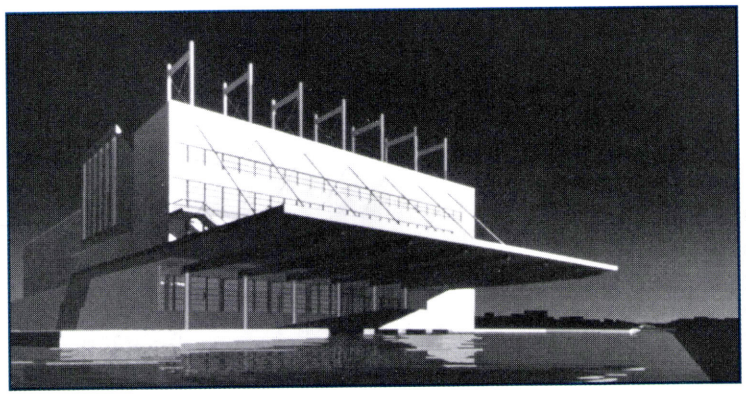


LONGITUDINAL SECTION: CANAL SIDE, LEFT; PIAZZA SIDE, RIGHT

40'/12m

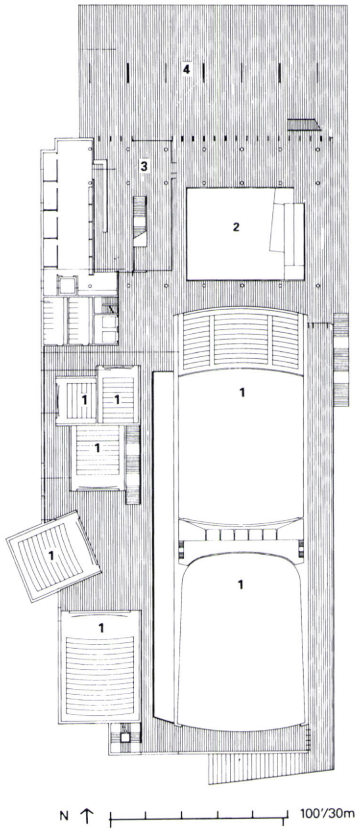


RAFAEL MONEO, CINEMA PALACE SITE PLAN



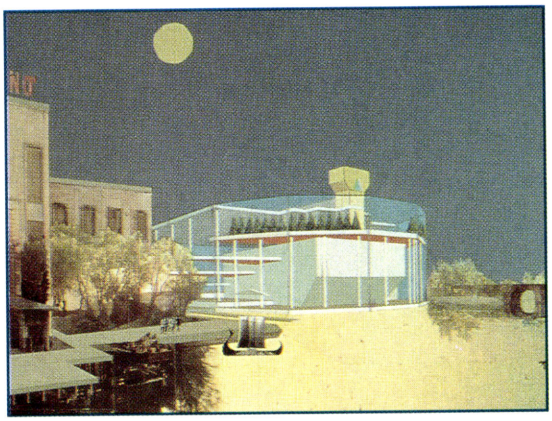
CINEMA PALACE SEEN FROM CANAL

Computerized Rendering: Nancy Cheng



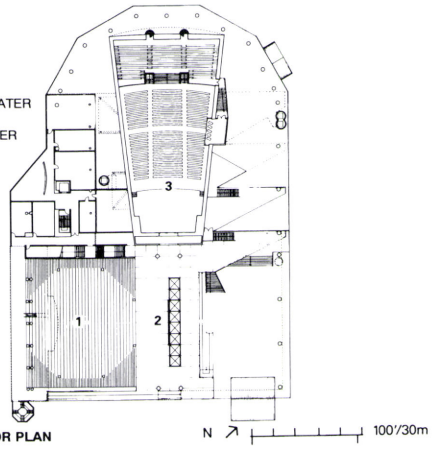
SECOND FLOOR PLAN

1 THEATER
2 LOBBY BELOW
3 BAR
4 CANOPY OVER CANAL

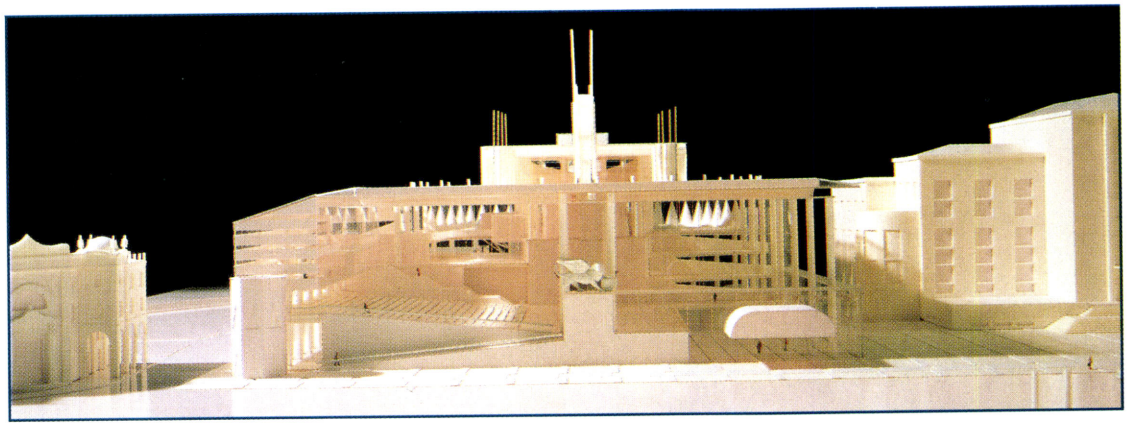


FUMIHIKO MAKI, COLLAGE OF CINEMA PALACE, SEEN FROM CANAL

1 OUTDOOR THEATER
2 SCREEN
3 INDOOR THEATER



MEZZANINE FLOOR PLAN



Taisaki Ogawa

MODEL OF CINEMA PALACE, PIAZZA SIDE

enough to encase the 1937 structure and mask its problematic political associations. In the end, only a portion of the expansion was completed: The Casino still stands essentially unaltered. The present-day competitors were asked to provide a scheme for a building much larger than the Casino, but still effectively subordinate to it in urbanistic terms – one of the most intriguing aspects of the competition. A two-ended site, accessed both from the Casino piazza and by boat from a canal to the west, complicated the situation, as did a height limit of 22 meters (about 70 feet), lower than the Casino.

The program called for seven cinemas varying in size from 40 seats to 1800, no two the same. At the same time, the Palazzo had to function as a film market during the Festival, with 1000 square meters (about 10,000 square feet) of exhibition space required. A restaurant/bar, large terrace, bookstore, extensive press offices, and administrative and backstage areas constituted the other major components of the program.

Only Jean Nouvel, Aldo Rossi, and Carlo Aymonino chose to retain substantial portions of the 1937 building. Nouvel frames Quagliati's original façade with an expansion of formidable technical machismo, acknowledging in his text the existing building's troubled past, but citing its stylistic affinity with the great American and British pre-war cinemas as its saving grace. At the other extreme, Rafael Moneo chooses to deal with the problem by negating it. His proposal demolishes the existing building and orients its ascetically Minimalist replacement towards the Lagoon and Venice itself, away from the Casino's piazza and skewed off its alignment. The other schemes, including designs by O.M. Ungers, Mario Botta, and Sverre Fehn, occupy ideological positions somewhere in between.

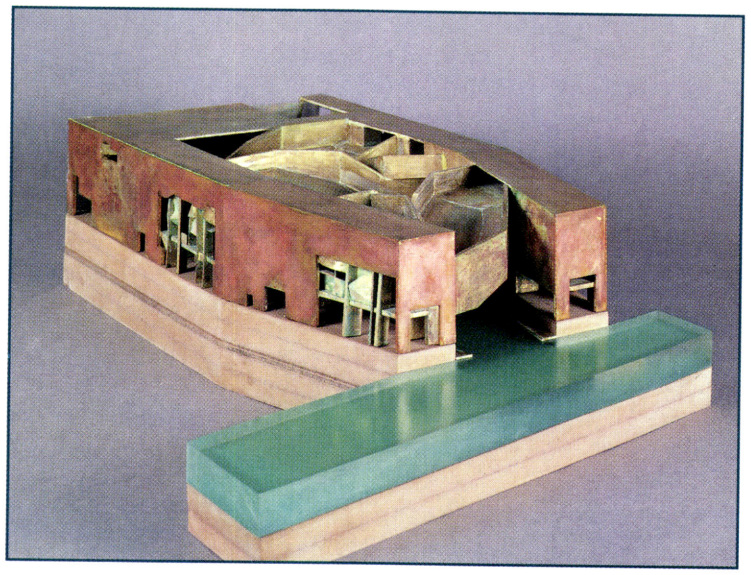
Of the ten entries, Nouvel's and Moneo's, together with those of Fumihiko Maki and Steven Holl, are particularly provocative. Nouvel strives to reconnect the Palazzo to Venice proper through views and allusions, and by giving the canal and piazza fronts equal presence, re-using the existing out-

door cinema on the canal as a monumental entry stair. Above, new facilities wrap around and over the refurbished Quagliati building, flanked by eight double-spiral exit stairs and topped by an immense roof terrace. Within the theaters, glazed end walls give living "shots" of Venice and the Adriatic before the screen descends. We must once again recognize the quasi-religious nature of the movie theatre, Nouvel declares, and we must "restore the luster to the temple."

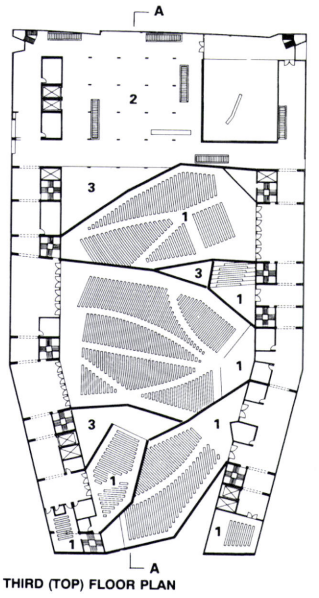
Moneo, by contrast, continues his recently initiated investigation into Minimalism. Given Moneo's enthusiasm for the work of figures like Ridolfi and Libera (contemporaries of Quagliati), the asceticism of the Lido project, aloof and enigmatic, is almost puzzling. But the Miozzi Casino has only a crude authority, and Moneo's interest is in the poetic power of the Lido's desolation and the lights of the floating city beyond, visible from his monumental suspended terrace. Within, the social choreography of plan and section is subtle and assured.

The populism of the entry by Marlies Hentrup, Norbert Heyers, in association with James Stirling lends an image of a different world. They seek to strengthen the identity of the Lido in contrast to Venice, by inflecting the scheme towards the piazza and the Casino, which in his reading is benign. Manipulating the early Modernist imagery of popular festivity – Duiker's Cineac, Asplund's Stockholm Exhibition – Hentrup, Heyers, and Stirling propose a highly circumstantial *parti* whose multi-level foyer is stretched between piazza and canal entrances but, like the roof terrace above, clearly favors the Adriatic view.

Fumihiko Maki's entry seeks a more lyrical engagement with Venice and the cinema, proposing an image that reconciles ephemerality and permanence. Maki's "Palace of Glass" is intended as an embodied mirage, a "crystal boat." The project gives near-equal but different presence to the canal and piazza sides, and undermines the pre-eminence of the Casino with an aggressive reconfiguration of the piazza's floor. While the major entry is inflected towards the

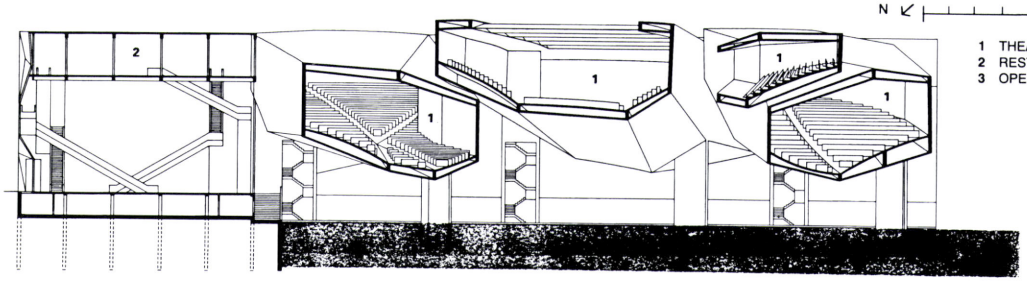


STEVEN HOLL, MODEL OF CINEMA PALACE, CANAL SIDE



THIRD (TOP) FLOOR PLAN

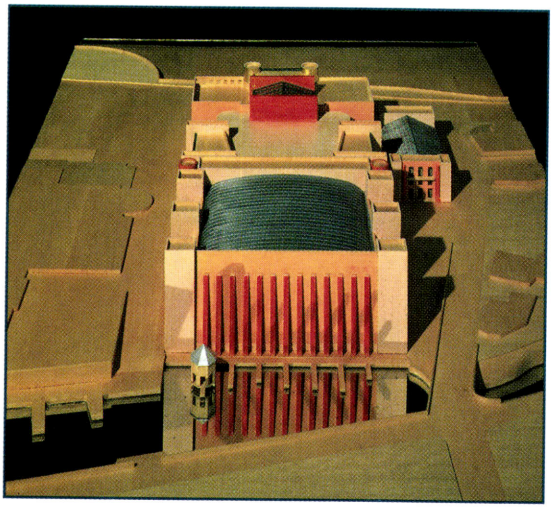
N 100'/30m



1 THEATER
2 RESTAURANT
3 OPEN TO BELOW

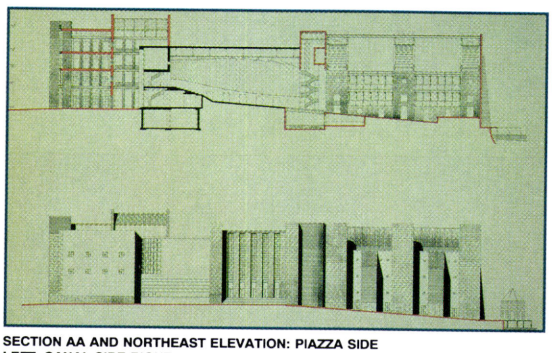
SECTION AA

40'/12m



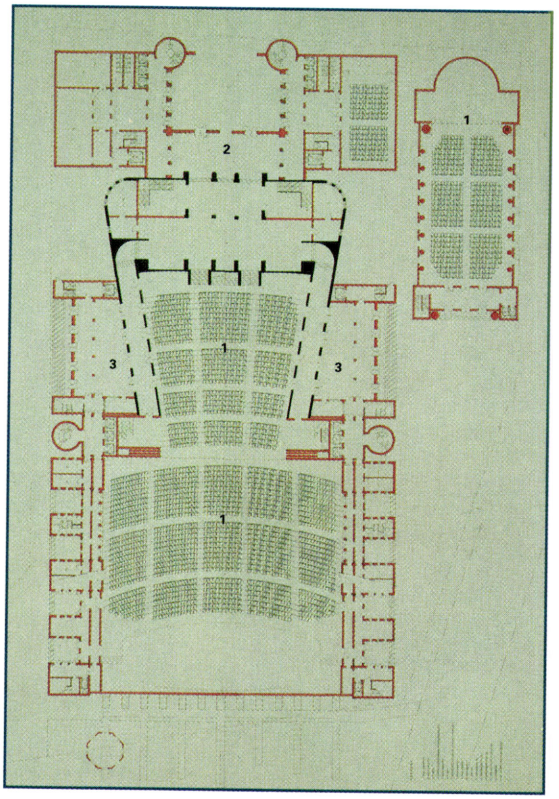
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ALDO ROSSI, MODEL OF CINEMA PALACE, CANAL SIDE



SECTION AA AND NORTHEAST ELEVATION: PIAZZA SIDE
LEFT, CANAL SIDE RIGHT

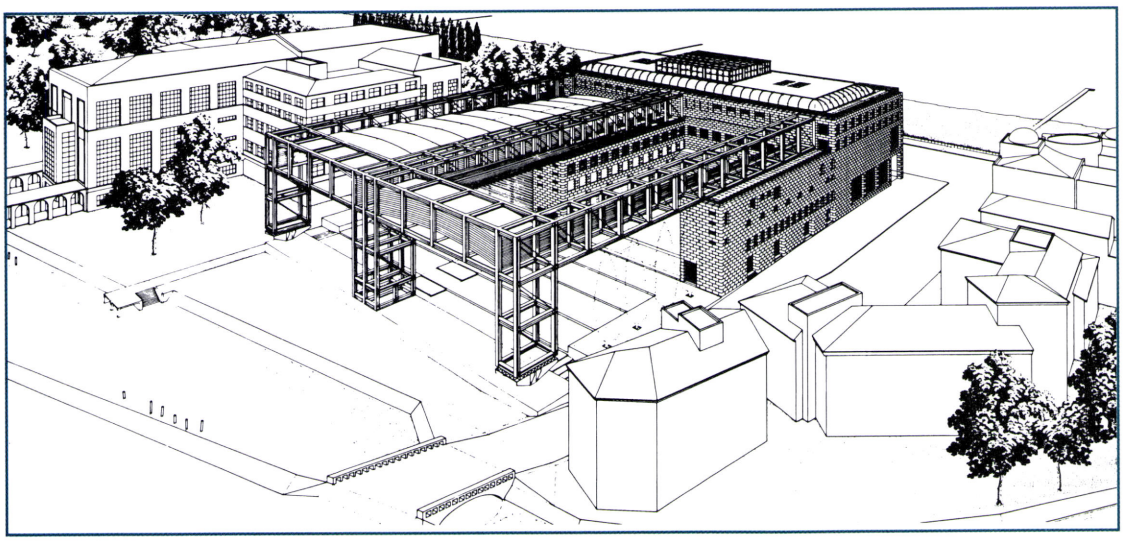
100'/30m



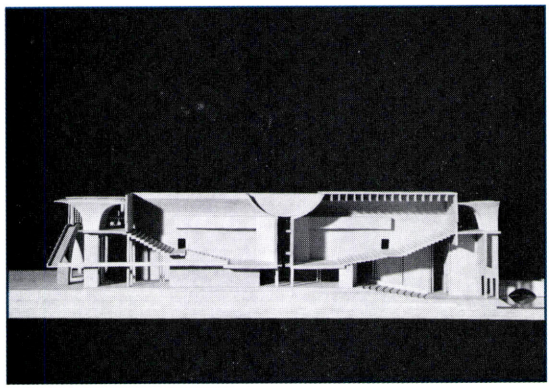
FIRST FLOOR PLAN

N 100'/30m

1 THEATER
2 ATRIUM/EXISTING ENTRY
3 NEW ENTRY HALL

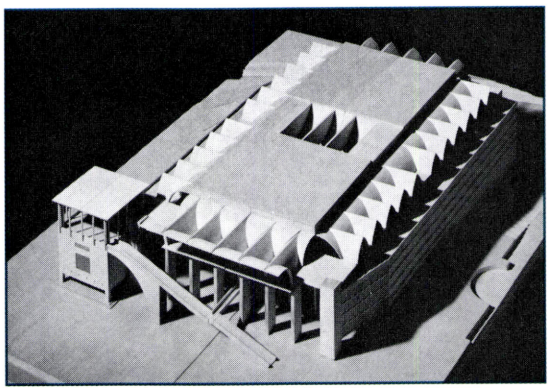


O.M. UNGERS, PERSPECTIVE OF CINEMA PALACE, CANAL SIDE

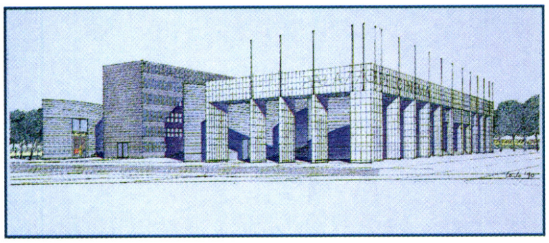


Model: Katrine Auslid, Amund Gulden

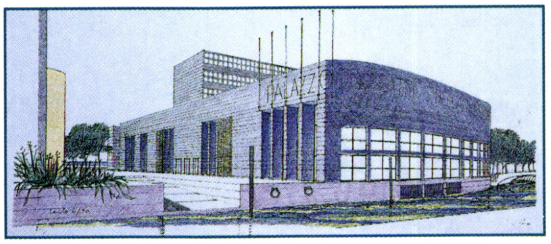
SVERRE FEHN, SECTIONAL MODEL OF CINEMA PALACE: PIAZZA SIDE, LEFT; CANAL SIDE, RIGHT



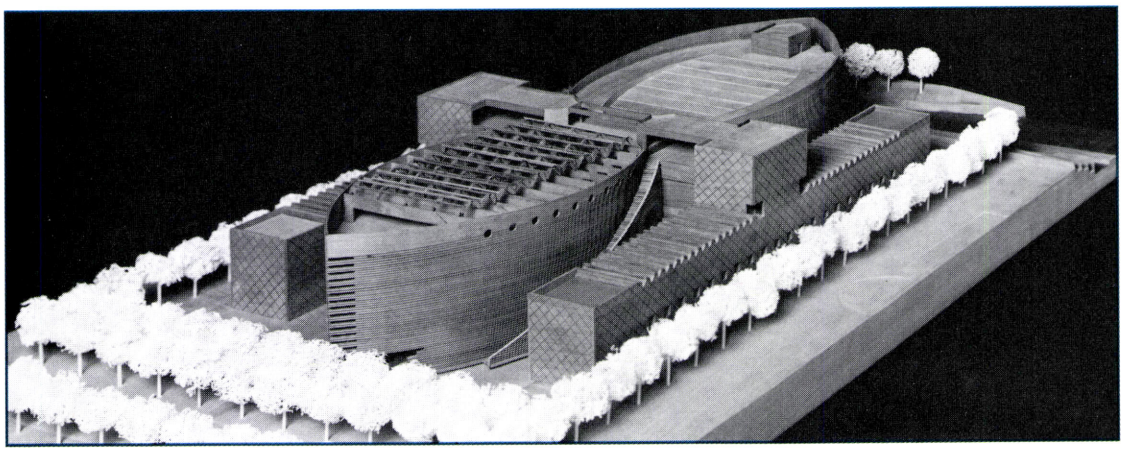
MODEL OF CINEMA PALACE, PIAZZA SIDE IN FOREGROUND



CARLO AYMONINO, PERSPECTIVE OF CINEMA PALACE, PIAZZA SIDE



PERSPECTIVE OF CINEMA PALACE, CANAL SIDE



Marco D'Anna

MARIO BOTTA, MODEL OF CINEMA PALACE, PIAZZA SIDE IN FOREGROUND

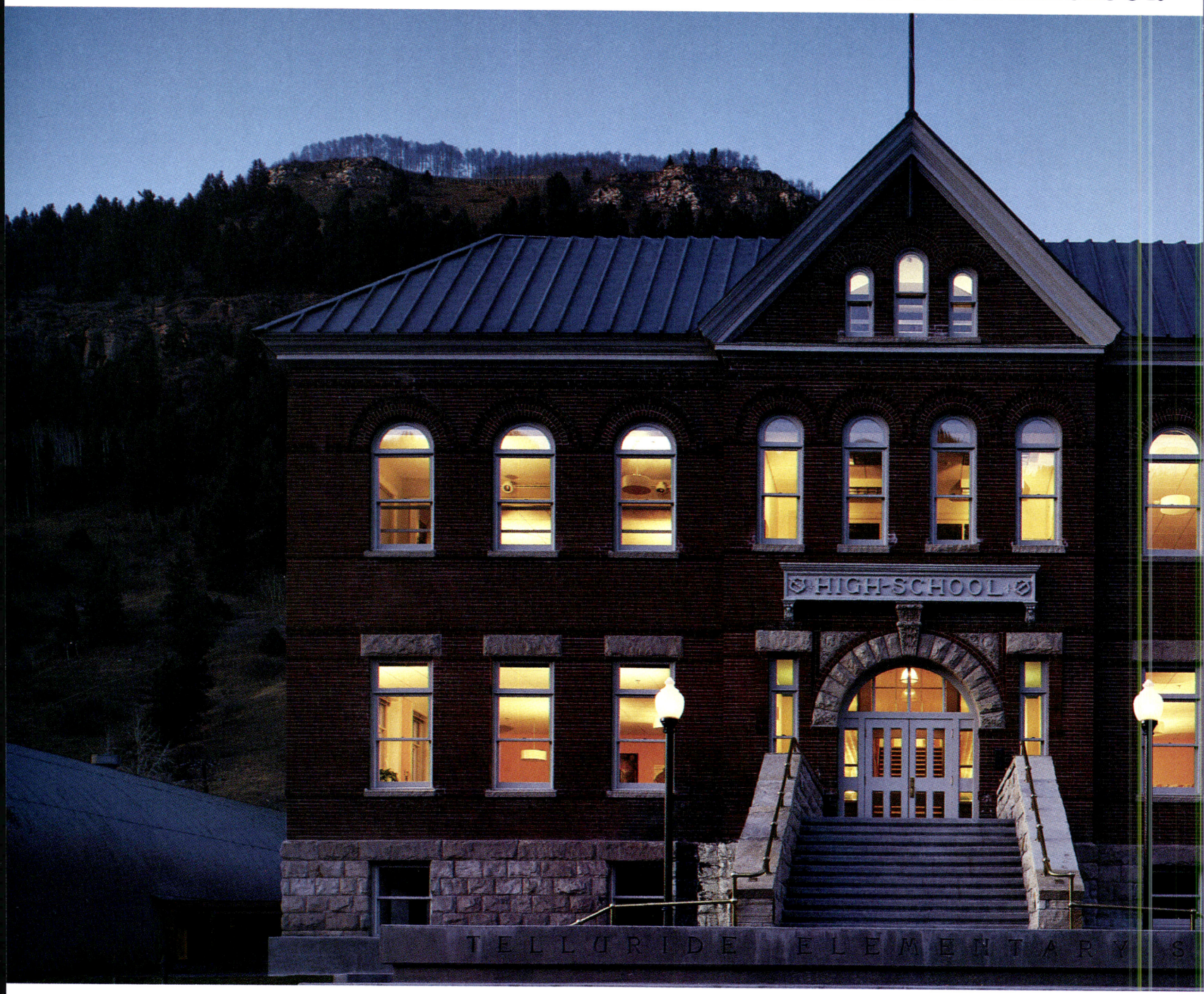
Casino, à la Stirling, open-air terraces on the upper levels face both the Lagoon and the Adriatic, offering to both approaches the spectacle of a building whose solidity disappears as day turns into night.

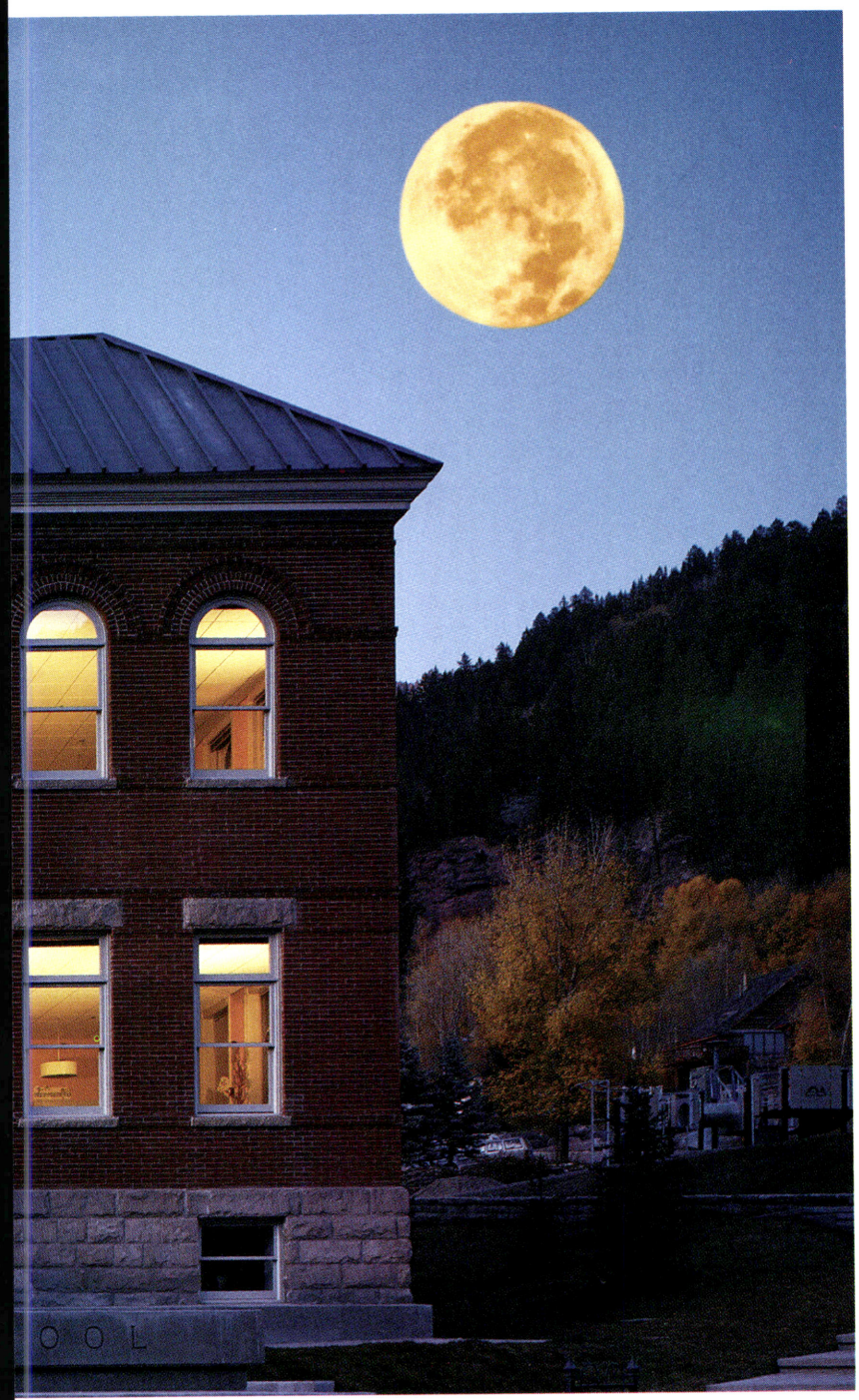
A "phenomenological link between cinema and architecture," structured around the theme of cinematic and real time, is the high ambition of Steven Holl's entry, whose references to recognizable architectural form and the surrounding context are among the most abstract in the competition. Holl proposes an extraordinary space of arrival: an artificial grotto formed by the arms of a U-shaped plan open to the canal, and overhead, the interlocking forms of the six larger theaters, spanning the gap as contorted solids. Between them, fissures allow shafts of light to fall upon the water of the arrival basin, sending reflections over the surfaces of this architectural cavern. While the sight lines of the theaters seem occasionally improbable, the disruptions they induce in the brass alloy-clad façades are undeniably powerful: With the screens removed, fragmented projections fall on skewed shear walls, reversing the effect of Nouvel's glass walls.

The urban context, by contrast, is of central importance to Aldo Rossi's entry, though in the abstracted manner that is characteristically his. The project partially encloses the 1937 Palazzo. Acknowledging that Quagliati's building "is not one of the better works of those years," Rossi nonetheless recognizes it as a relic of a world otherwise lost, evocative of the peculiar melancholy of the Lido, and presents its façade in a skylighted atrium. The remainder of the project takes the form of an abstracted fortification, recalling the Arsenale. The 600-seat hall is articulated as a free-standing basilica – not so much in recognition of the quasi-religious nature of movie-going as in fragmentary allusion to the urban fabric of Venice. **Graham Owen** ■

The author is an Adjunct Assistant Professor of Architecture at the University of Toronto. He holds an M.Des. from Harvard, where he undertook a studio project based on the Palazzo del Cinema program.
The author wishes to thank the Canada Council for their support of the research for this article.

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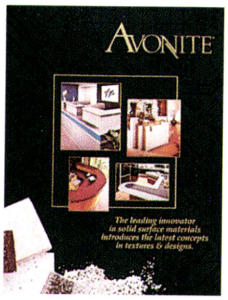
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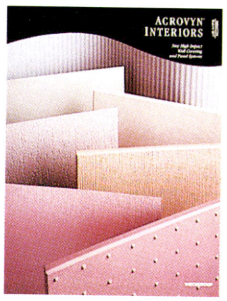
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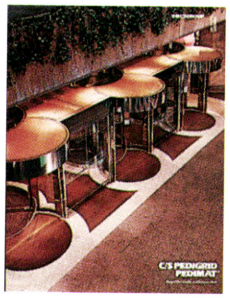
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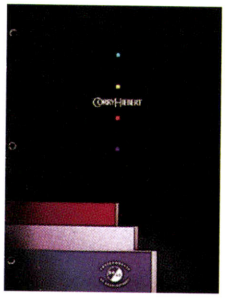
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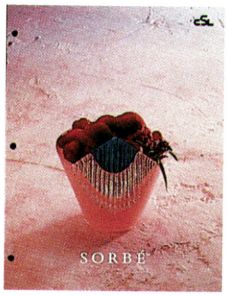
The C/S Group has an 8-page brochure describing its improved Pedimat® entrance mats. Pedimat® has all-aluminum hinged tread rails with plush 100 percent nylon carpet treads in 25 designer hues. And now your carpet Pedimat® can easily be personalized with your logo or trademark.
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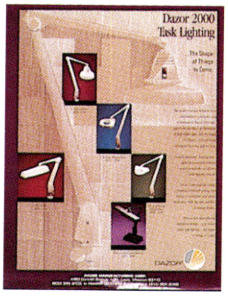
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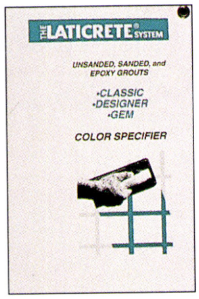
This catalog includes extensive technical and performance information on Sorbé® low voltage Halogen fixtures and glass diffusers. Pendant and wall sconce fixtures are available in polished brass or chrome and a variety of diffusers with different frosted glass colors and shapes.
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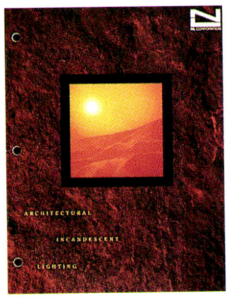
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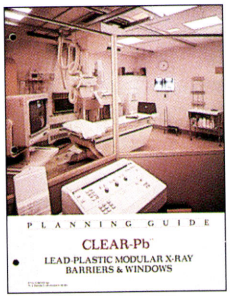
The 1991 Catalog includes information on Levolor's full line of horizontal and vertical blinds, specialty shaped blinds, and architectural shades. Installation drawings and performance characteristics make the 27-page catalog a complete source for those specializing in commercial renovation or new construction.
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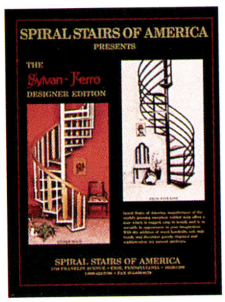
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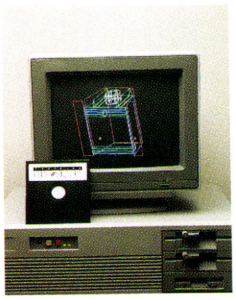
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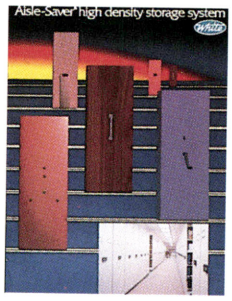
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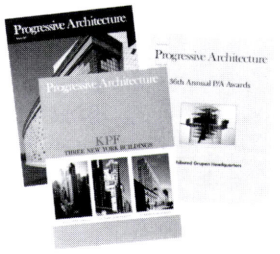
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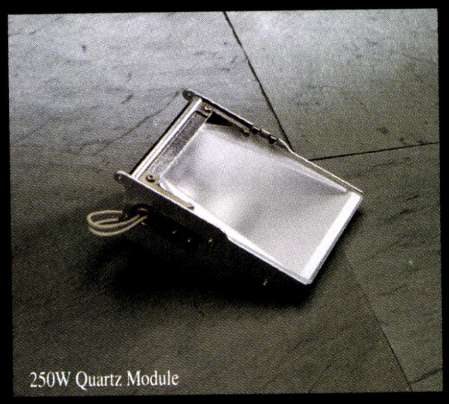
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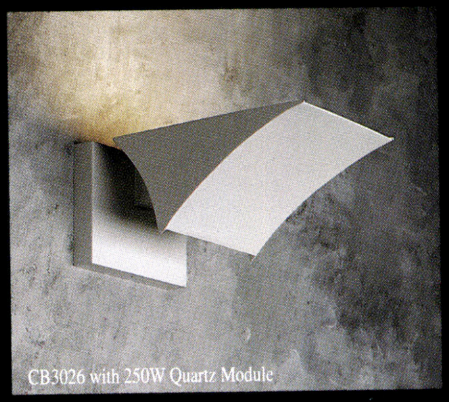
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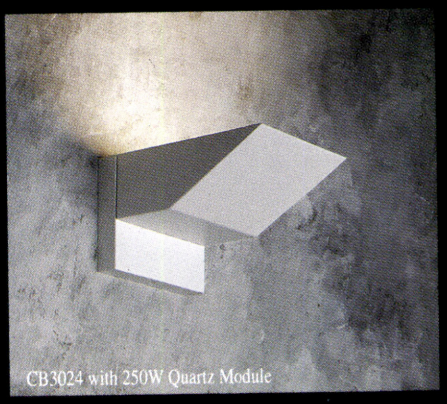

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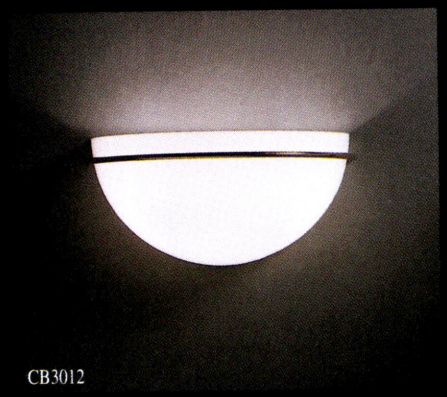

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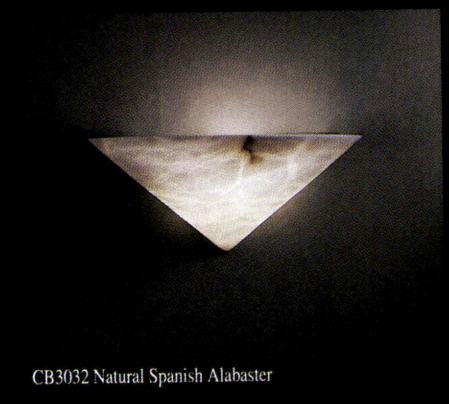



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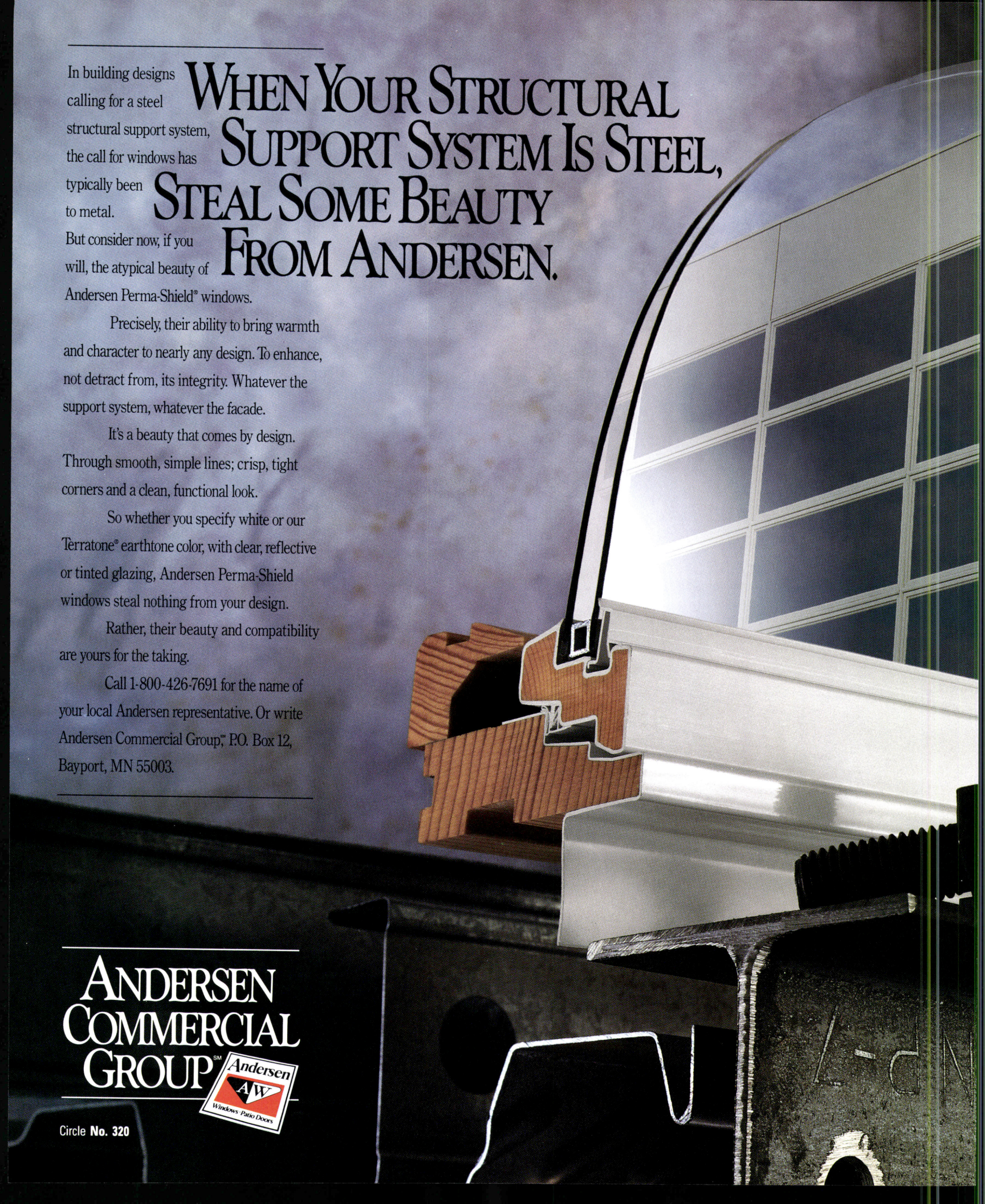
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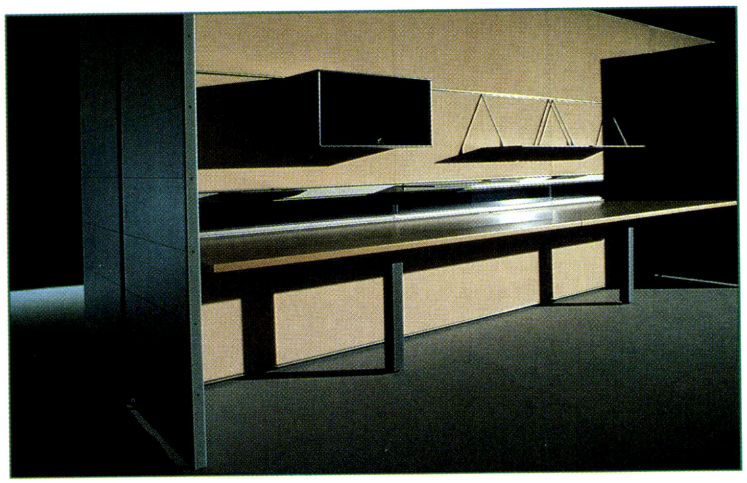
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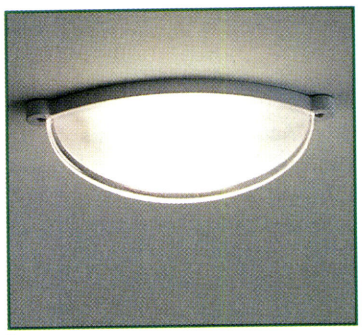
New Products and Literature

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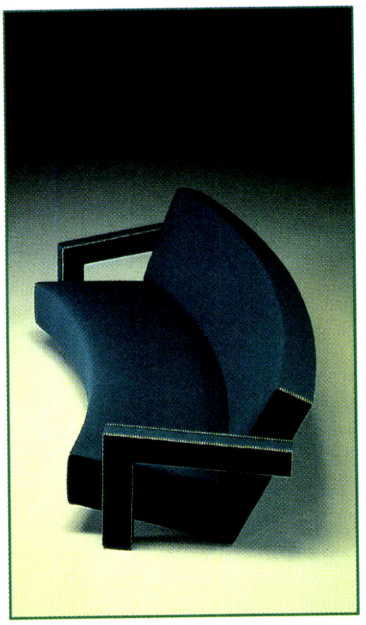
1



2



3



4

1 Architectural Office Wall
"Progetto 25" was designed by Luca Meda as an alternative to conventional office panel systems. The freestanding "wall" can be clad in a variety of architectural materials – such as plaster, stucco, or wood – or upholstered in fabric or vinyl. It is 5 inches thick, its height is modular in 9⅞-inch increments, and joints between horizontal modules can receive other office elements – shelves, panels, tables. Unifor.
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2 Wall/Ceiling Fixture
"Mitasi," designed by Ernesto Gismondi, can be employed as a wall or ceiling-mounted light diffuser. It can house incandescent or compact fluorescent lamps and is available in 12- and 16-inch models. Artemide.
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3 Wrightian Textiles
These three textiles ("Prairie Fern" is a 100 percent wool damask ; "Prairie Mirage," and "Coonley Weave" are both 100 percent cotton), derived from designs in the Avery Coonley house, are among nine woven textiles in the Frank Lloyd Wright collection. Schumacher® Contract.
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4 Gerrit Rietveld Seating
"Utrecht," available in an armchair or two-seat sofa version, was designed by Gerrit Rietveld and is now produced under license from his estate. It can be specified in fabric or leather. Atelier International.
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Preview: Designer's Saturday

The 24th annual Designer's Saturday will be held in New York October 17–19 at IDCNY in Long Island City, A&D and DAC buildings in Manhattan, and at individual member showrooms throughout the city.

The following programs are among those scheduled at the IDCNY: "Clearing The Air," moderated by *Interior Design* Editor Stanley Abercrombie (Oct. 17, 9:30–10:30 a.m.); "Clearing Up the Claims: Materials and the Environment," moderated by P/A Executive Editor Thomas Fisher (Oct. 17, 2:00 p.m.); "Venturi on Venturi" (Oct. 17, 4:00 p.m.); and "Professional Organizations Go Environmental," a roundtable discussion by representatives from AIA, ASID, IBD, IDSA, and IFMA on their environmental initiatives, resources, and information (Oct. 18, 11:00 a.m.). Among IDCNY exhibitions are: "The Environmentally Sound Office" and "Environmentally Conscious Architecture." Among the programs at the A&D building will be: "Internationalizing Your Business" moderated by Stanley Abercrombie (Oct. 17, 3:00–4:00 p.m.); and "The Economy and the Industry" moderated by *Crain's New York Business* Editor Greg David (Oct. 18, 9:00–10:00 a.m.).

The products featured here and shown on the next two pages will be on display at Designer's Saturday; some are making their debut at this market, others were introduced elsewhere during the year. ■

(continued on page 158)

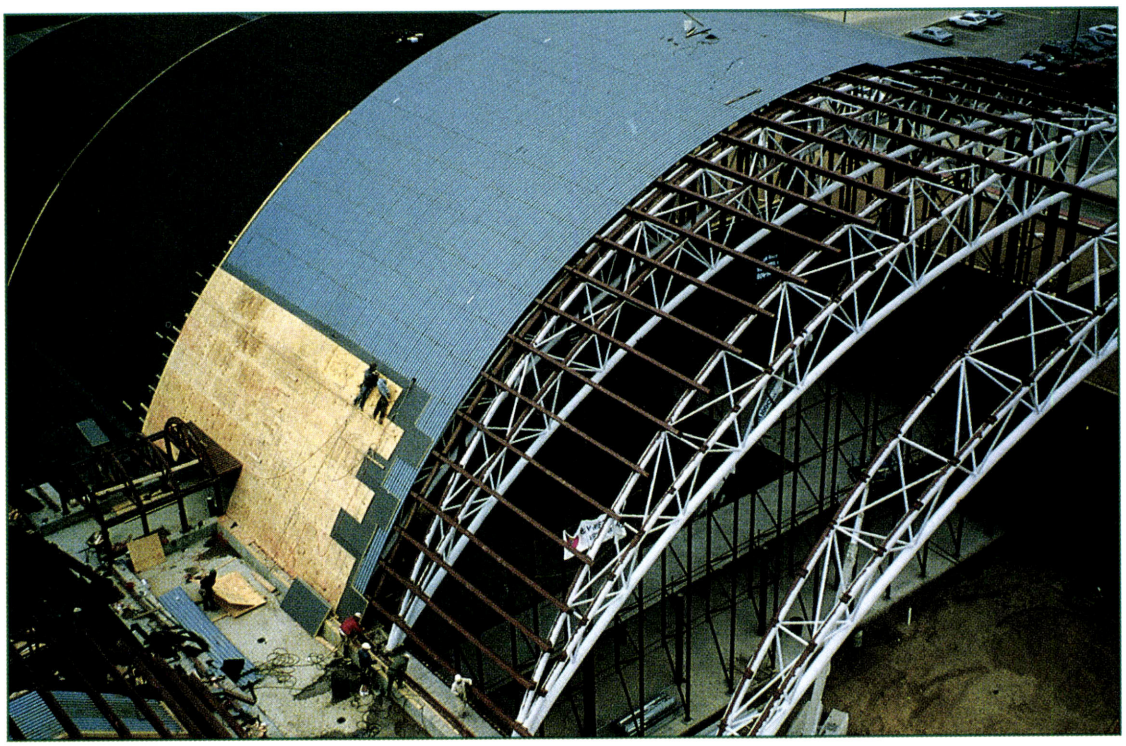
Color
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Performance



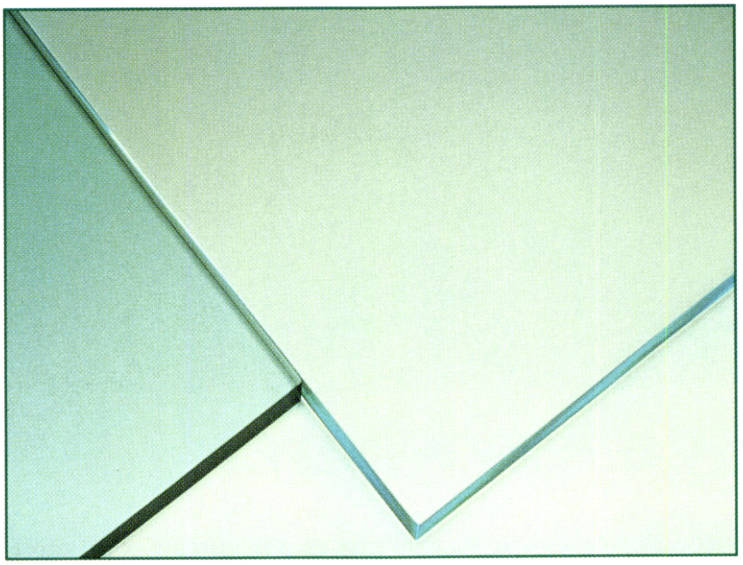
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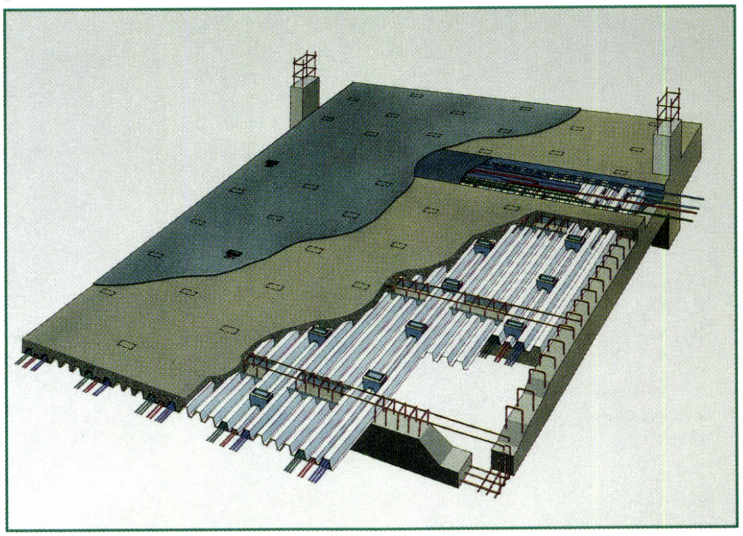
Circle **No. 351** on Reader Service Card



1



2



3

Building Products

1 "Crimp-Curved" Metal Panels

Metal panels (in structural and nonstructural applications) for roofing, decking, fascia systems, walls, canopies, and other architectural components can be shaped into "virtually any radius or angle" through the "crimp-curving" process. Painted or unpainted galvanized steel, aluminum, anodized aluminum, and aluminized steel from 18 to 29 gauge can be specified. The process can accommodate panels two- to 30-feet long and up to five feet wide. Curveline.

Circle 104 on reader service card

2 New, Clearer Glass

"Starphire" float glass "is a crystal-clear, soda-lime glass product. . . with a low iron composition with mechanical and physical properties similar to ordinary float glass." It can be tempered to offer the same strength as ordinary glass. Applications are varied; it is available in thicknesses from 1/8-inch to 3/4-inches. PPG.

Circle 105 on reader service card

3 Access Flooring

The "Cellcast Floor System" is designed to offer "high capacity, low-cost wire and cable distribution for cast-in-place concrete construction." It has a built-in wire raceway system and steel floor units to carry all dead and live loads. The system uses a monolithic concrete pour for slabs, beams, and girders; 5½- or 6-inch slab depth is required. H. H. Robertson.

Circle 106 on reader service card

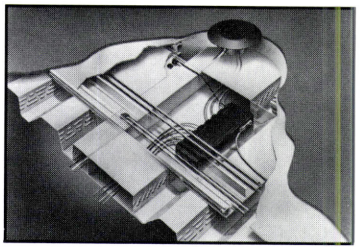
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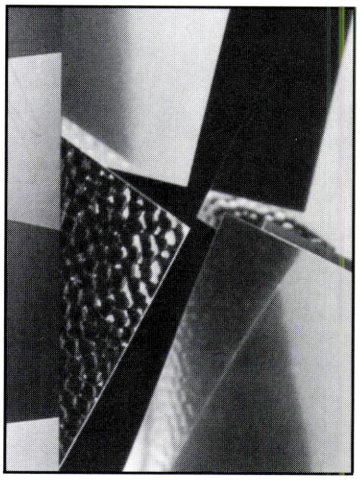
Building Products

Paving from Recycled Rubber
"FlexTech" paving system manufactured with recycled rubber granules and "high-tech resins," may be used to resurface pavements and flooring without demolition; it adheres to concrete, asphalt, metal, and other surfaces. It can be grouted or color-coated and is applicable for commercial and residential use. Bomanite.
Circle 120 on reader service card

Acoustical Door Publication
Sound-rated door designs and performance capabilites are described and illustrated in a new brochure. These factory-assembled doors are applicable in commercial, institutional, and industrial buildings for new construction and retrofit projects. Industrial Acoustics.
Circle 203 on reader service card



Poke-Thru Electrical Fittings
The full capacity "Flush Poke-Thru" electrical fitting now has four power outlets. This "Quad" version is the same size as the two-outlet version; it is constructed of thermoset plastic receptacles and polycarbonate slide cover. Raceway.
Circle 121 on reader service card



Anodized Aluminum Colors
Anodized aluminum for interior or exterior applications offers a low-maintenance reflective surface for cladding, walls, entrances, roofs, canopies, trim, fascia, and interior ceilings. It may be specified in a variety of colors: clear, black, bronze, and burgundy for use inside or out; copper, red, blue, green, and yellow are available for interior use only. Lorin Industries.
Circle 122 on reader service card

New "Corian" Colors
The "Jewel Series" has been added to the Corian color collection. "Burnt Amber," "Garnet," "Black Pearl," "Sapphire," and "Jade" were designed to coordinate with the existing 13-color collection. Du Pont.
Circle 123 on reader service card

(continued on page 166)



We'll go anywhere!

Even in a vault. We put two of our White Aisle-Saver® mobile high density storage systems in the vault of a former Federal Reserve Bank Building. Now it's the records center for a major law firm.

We'll go anywhere to help a customer get the extra storage density and greater efficiency they need and want. In the vault we used special size carriages to maximize storage. They were 30½" wide carriages, instead of the more standard 30". And added special features, such as seismic track and a special gear ratio that allows just one person to move as many as nine fully-loaded carriages at once.

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The Boston Bumper.

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Circle **No. 319**

(continued from page 162)

Sag-resistant Gypsum Ceiling Board

The new 1/2-inch-thick sag-resistant sheetrock Brand Interior Gypsum Ceiling Board is suitable for use on 24-inch joists with heavy water-based spray textures, and a maximum 1.3 pounds of unsupported insulation per square foot. The boards may be cut, fastened, and finished like standard gypsum panels. USG.

Circle 124 on reader service card

Wood and Foam Substrate

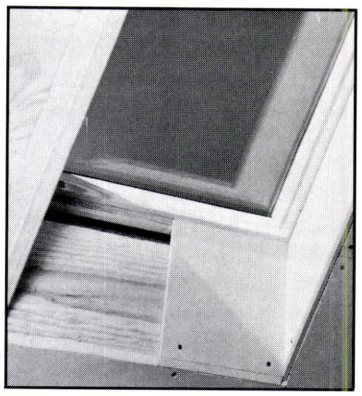
"Excel Board"™ is a new construction substrate manufactured with wood fiber and foam. As a sheathing substrate for stucco, it is designed for use in wood frame, masonry, or steel stud construction. A minimum thermal barrier of ½-inch gypsum board or the equivalent must be attached to the interior stud facing. Panels are ¾-inches thick, four feet wide, and come in 8- to 12-foot lengths. American Excelsior.

Circle 125 on reader service card

Tapered Insulation

"Tapered Styrofoam"® is designed to protect roof decks and membranes from the stresses and hazards of ponding water. Panels are 2″ × 8″ with standard slopes of ⅛ and ¼ inches per foot; other slopes can be specified. The Dow Chemical Company.

Circle 126 on reader service card



New Skylight Trim Groove

This redesigned skylight trim groove is sized to accept standard ½-inch wallboard and ⅝-inch fire-rated wall-board. Extra framing or trim, shim, and moldings are no longer necessary. The groove is beveled so the opening or shaft can be flared for maximum light distribution. Velux-America.

Circle 127 on reader service card

New Slate Brochures

An updated version of the architectural roofing slates brochure and and a technical brochure, *Installation Guidelines*, are now available. Eternit.

Circle 204 on reader service card

Energy-Saving Construction

Energy-saving guidelines for the design and construction of pre-engineered building systems are described in five fact sheets. Information on heat transfer, energy-related organizations, the effect of wall mass in limiting heat flow, thermal testing of roof and wall sections, and the insulation of building edges and perimeters is included. Contact Metal Building Manufacturers Association, 1230 Keith Building, Cleveland, OH 44115–2180. Cost: $2.

Curved Metal Panels Brochure

The "CAP System"™ of curved architectural panels for roofing and siding is described in a new brochure. Available finishes, profiles, and colors, and product installations are illustrated. Steelite.

Circle 205 on reader service card

(continued on page 169)

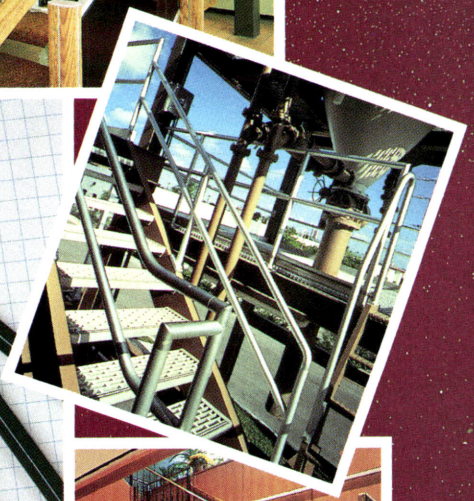


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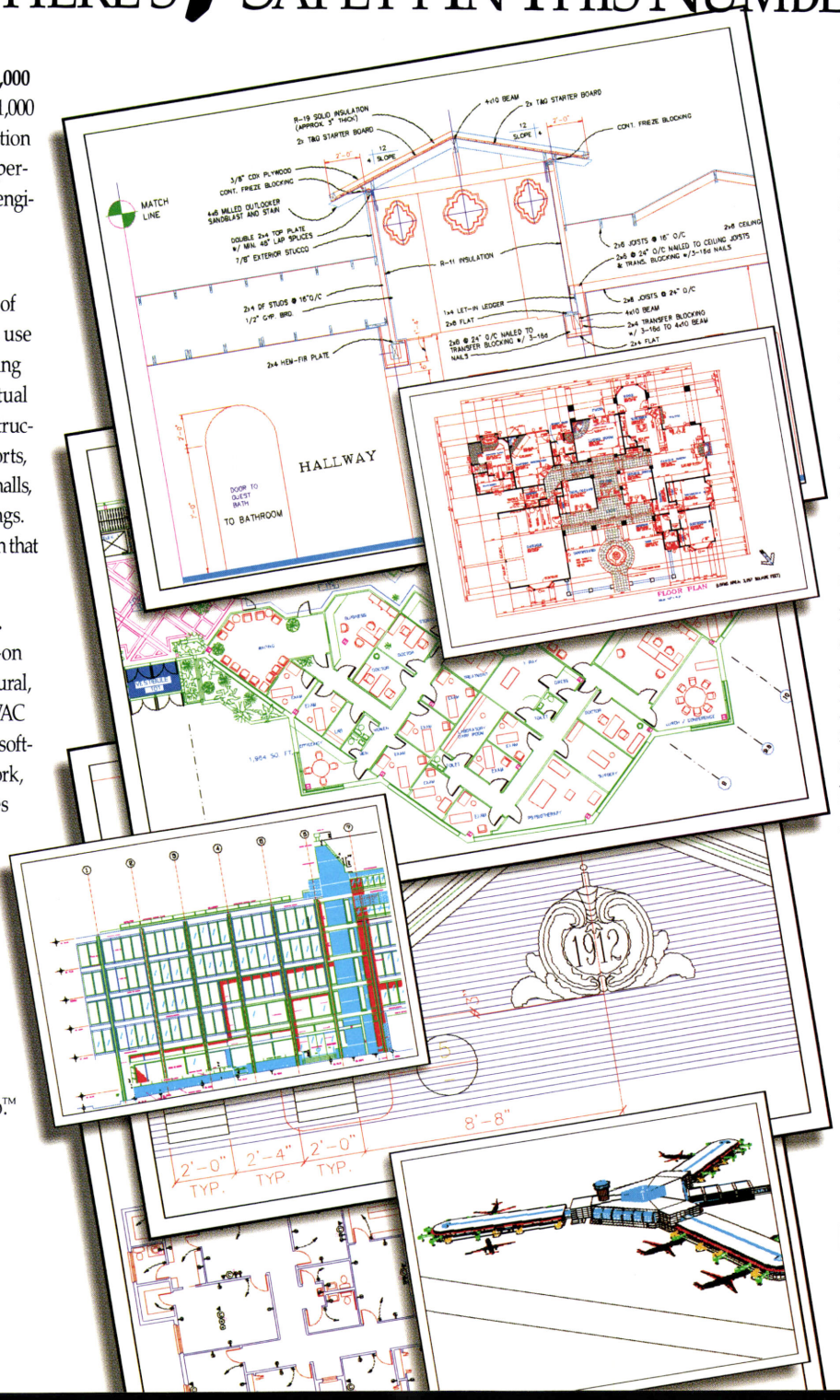
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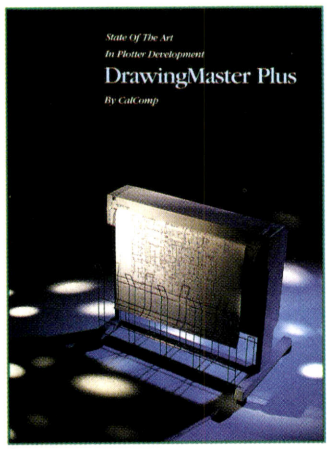
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Circle **No. 346**

Computer Products



1



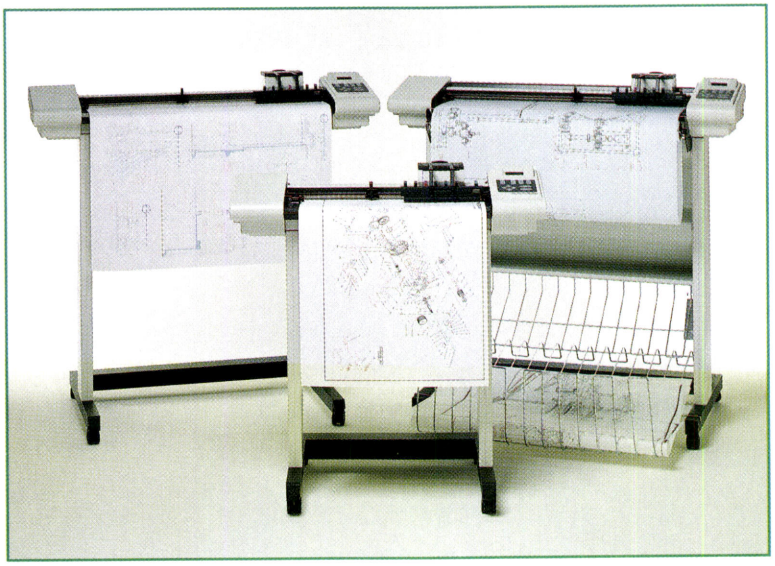
2



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4



5

Output Devices

1 Plotter Brochure
A new eight-page color brochure describes the "DrawingMaster Plus" line of direct imaging plotters, which create images with heat applied directly to a thermal medium. Calcomp.
Circle 200 on reader service card

2 Product Catalog
A new 25-page pocket catalog features plotters and supplies that include the desktop "Sketchmate" pen plotter (shown here) and the "LTX" line of direct thermal imaging plotters. Roland Digital Group.
Circle 201 on reader service card

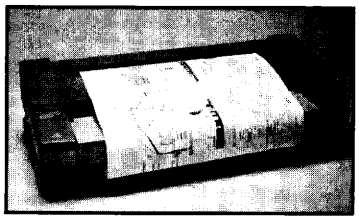
3 Direct Imaging Plotters
The new "9800 Series" direct imaging plotters offer an automatic cutting and stacking system, automatic plot rotation, and the elimination of gaps between plots to save on supplies. Océ.
Circle 107 on reader service card

4 Digital Laser Copier/Plotter
The new "CAD Plotting Option" on the 9800 digital laser copier allows the user to plot 400 dpi resolution drawings from any CAD system as well as to copy and manipulate existing drawings. A scanner can copy blueline, sepia, or other drawings. AM Bruning.
Circle 108 on reader service card

5 Multi-User Pen Plotter
The new "Houston Instrument DMP-162R" pen plotter features an automatic roll feed and cutting system so that each drawing can be retrieved individually. Summagraphics.
Circle 109 on reader service card
(continued on page 170)

(continued from page 169)

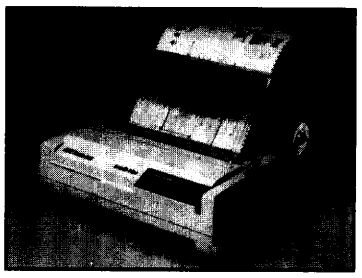
Computer Related Products



Large Format Thermal Output
The D-size "ExpressPlotter" claims to have an output time of one minute for a plot at 200 by 200 dpi resolution of either raster or vector images. The plotter can be used with a network and can reduce, enlarge, and provide multiple copies of each drawing. JDL.
Circle 128 on reader service card



Ink-Sensing Plotter
The "PenMinder™ ink-sensing system" on the 912is, 924is, and 936is model pen plotters uses an infrared beam to monitor ink levels and replace pens when they dry out. The eight-position pen holder can change pens in less than a second, for continuous plotting. Zeta.
Circle 129 on reader service card



Color Matrix Plotter
"Intelli-Plot™ Turbo" is a C-size desktop plotter that can print low- or high-resolution graphics and can queue up to 20 drawings. Plotting options include the ability to rotate, center, and size drawings, as well as providing a variety of fonts, colors, and line thicknesses. Advanced Matrix Technology.
Circle 130 on reader service card
(continued on page 172)

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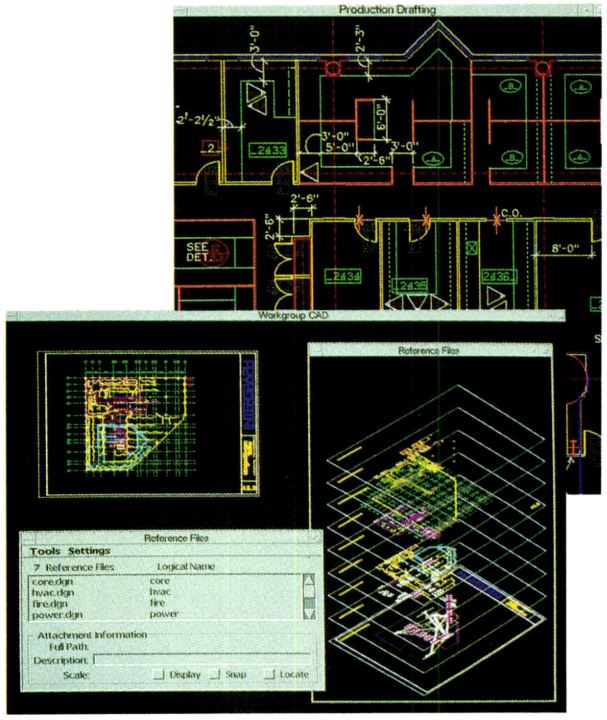
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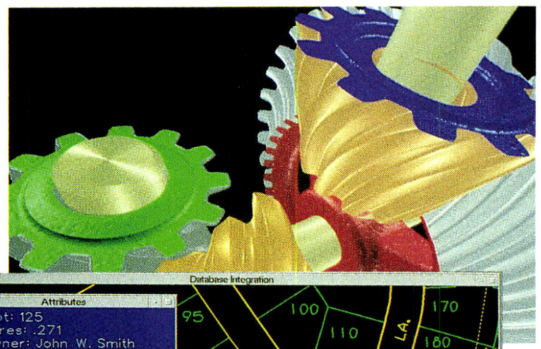
David Wesch
Sverdrup



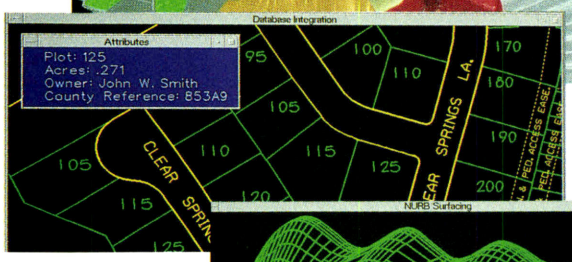
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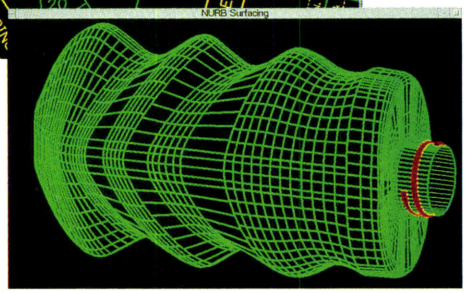
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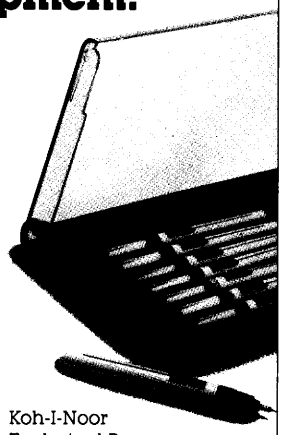
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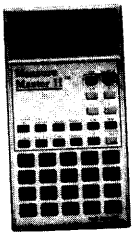
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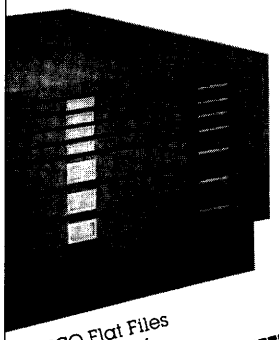




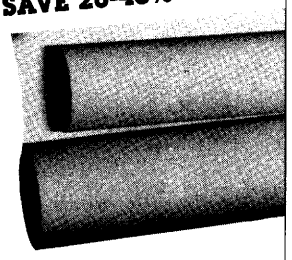
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Circle **No. 343**

(continued from page 170)

Technics-Related Products

Items on this page complement the Technics article on air and vapor barriers (p. 45) and the Diagnostic Clinic on corrosion (p. 53).



Residential Barrier

"TYVEK®" housewrap, made of high-density polyethylene fibers, allows moisture vapor to pass through, and provides an air barrier suitable for residential construction. Du Pont.

Circle 131 on reader service card

Zinc-Rich Coatings

The manufacturer suggests that to avoid corrosion, steel beams should ideally be sand-blasted clean and coated with "90–97 Tneme-Zinc" paint and then with "Epoxy Series 69/H.B. Epoxoline II." The coatings can also be used separately, and "Tneme-Zinc" may be applied without first sand-blasting the steel. Tnemec.

Circle 132 on reader service card

Concrete Embedment Coatings

Several products offer protection against steel corrosion in concrete construction. "SikaTop® 108" is a polymer-modified cementitious anti-corrosion coating for reinforcing steel. "Armatec 100" is a combination of epoxy and cement that serves as both concrete binder and corrosion-resistant coating. Sika.

Circle 133 on reader service card



Housewrap Brochure

A woven housewrap material installed directly over sheathing materials adds to the R-value of insulation materials and provides an air and water vapor barrier. "AMOWRAP™" features a UV stabilization material that is said to protect the material from exposure to the elements for up to 90 days during the construction process. A 4-page installation brochure provides more information. Amoco Foam Products.

Circle 206 on reader service card



Moisture Barriers

Both "Rufco-Wrap" and "Super Sampson" are made of cross-laminated polyethylene and are said to reduce moisture in residential walls or slabs. Raven Industries.

Circle 134 on reader service card

Barrier Membrane

"Perm-A-Barrier™" wall flashing and wall membrane material consists of multiple cross-laminated layers of polyethylene film bonded to a layer of rubberized asphalt. The self-adhesive material is available for use as wall flashing, wall membrane, or as wall seam tape for concrete, masonry, gypsum, or wood wall construction. W.R. Grace.

Circle 135 on reader service card



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Imaginative and functional - the definition of the tile Metropolis.
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Building Materials

Major materials suppliers as they were furnished to P/A by the architects for buildings featured this month.

Project: Townhouse renovation, New York (p. 102). *Architects: Peter Wheelwright Associates, New York.* Pigmented plaster with carborundum chips: Wall Constructions. Maple and mahogany woodwork: Steven Truslow. Custom metalwork: Solo Engineering. Terrazzo: D. Magnan. Glassblock floor: Circle Redmont. Theater curtains: General Drapery Services. Low voltage incandescent lighting: Edison Price, Norbert Belfer.

Project: Island Records Offices, New York (p.106). *Designers: Walz Design, New York.* Office ceilings, skylights: Kalwall. Ceilings, partition wall surfaces: Tectum Inc. Playground matting: AFCO. Vinyl-impregnated jute-backed bulletin board cork: Forbo-Kromenie B.V., Holland. Open-weave burlap hung with pigmented plaster: Wall Art. Fiberglass grating: Corgate. Polarized glass "Varilite" vision panels: Tauq Corp. Synthetic felt: Aetna Felt. Frost finished Lumasite panels: American Acrylic Corp. Hollow metal and solid core masonite doors: Transformer Co. Aluminum doors: Treitel Gratz Co. Door hardware: National Lighting Co. Hinges: Hager; Rixon; Dejong. Locksets: Schlage. Custom steel entrance door, aluminum lighting reflectors, brass rods, ceiling plates, perforated metal radiator covers, steel frames, perforated metal panels: Giza & Sons. Fluorescent fixtures: National. Exterior incandescent fixtures: Stonco Lighting Union. African slate flooring: Innovative Marble & Tile. Indoor/outdoor glue-down carpet: Ozite. Coir matting: American Floor Products. Wool sisal: SCS Systems Ltd. Custom soapstone sinks and water fountains: Vermont Soapstone. Aluminum bathroom accessories: Modric. Kitchen faucets: Chicago Faucets. Steel files and shelving systems: Meridian. Steel cabinets: Equipto. Walz's Silhouette sofa, Jersey chair: Arc International. Walz's corkball couches: Mark Hill Fabrications. Eames Universal Base chairs: Herman Miller Inc. Draperies with double layer of burlap below and nylon netting above: Mary Bright Originals. Aluminum track: Ka-Lor Cubicle & Supply Co. Leather upholstery: Edelman Leather; Spinneybeck. Cork: S. Harris & Co. Table lamps: Art Specialty Lamps. Ceiling paint: Benjamin Moore. Wall paints: Golden Acrylics.

Project: Silbermann, Apartment, New York (p. 112). *Designers: Hariri & Hariri, New York.* Stucco fireplace wall: Portland Cement and sand. Paint: Benjamin Moore. Bathroom walls and floor tile: American Olean. Floor: stained oak. Kitchen lighting: Lightolier. Sofa: by Jean Michel Frank at Palazzetti. Lounge chair: by Charles Eames at Palazzetti. Dining table: by Albeck Mobler table at Modern Age. Dining chairs: Arne Jacobsen stackchair at ICF. Sunscreens: Urbanshade.

Zuk & Associates, Emeryville, California (p. 114). *Architects: Mathews Bice Debbas, San Francisco and Berkeley, California.* Cement plaster walls: La Habra. Glass blocks: Pittsburgh Corning. Conference room folding partition: Emco. Carpet: Designweave. Incandescent track lighting: Halo. Incandescent wall-mounted lighting: Artemide. Conference room incandescent wall-mounted lighting: Prisma. Workstation incandescent wall-mounted lighting: Stonco. Tungsten halogen wall-mounted lighting: Stonco. Reception recessed ceiling lighting: Lightolier. Manager's desk and conference room tables: custom designed by architects. Upholstered furniture: Beverly Interiors Manufacturing. Conference chairs: CCF. Fabric: DesignTex. Kitchenette cabinets: Kaskia.

Shinko Management Co., Beverly Hills, California (p. 118). *Architect: David Kellen Architect, Santa Monica, California.* Walls: Expo Stucco. Windows: G.C. Slate tile: American Olean. Carpet: Lotus. Ceiling: USG. Paint: Frazee. Varnish: Barnard Chemical Company. Lighting: Lithonia. Conference table, desks, credenzas: designed by David Kellen, fabricated by Modo. Seating: Herman Miller.

Project: The Robert Mapplethorpe Foundation, New York. (p. 124). *Architects: 1100 Architect, New York.* Walls and ceiling: painted gypsum board. Steamed beech veneer: Patrick Mackin. Tinted plaster: Massartre. Steel angle and laminated glass door: John Delorenzo & Brothers, PAtrick Mackin Cabinetry. Floors: maple with white stain. Pivot and pocket hinges: Rixson, Stanley. Locksets and lever handles: Yale. Door closer: Rixson. Sink: American Standard. Cooktop: Andi-Gas. Suspended halogen fixtures: 1100 Architect. Recessed incandescent: Lightolier. Workstations and shelving systems: 1100 Architect, Massartre. Handwoven linen drapery: James Gould Textiles. Spring roller drapery hardware: Jules Edlin.

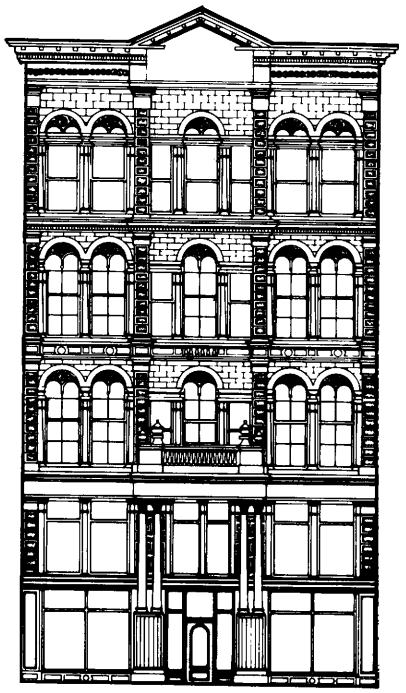
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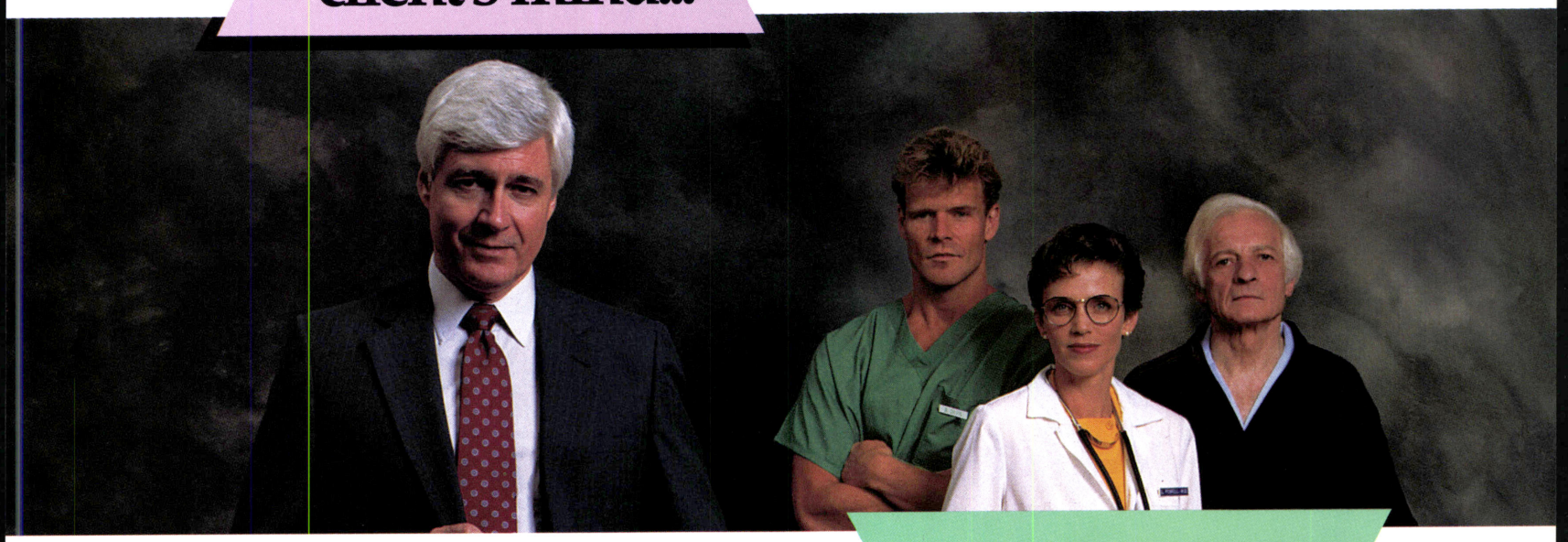
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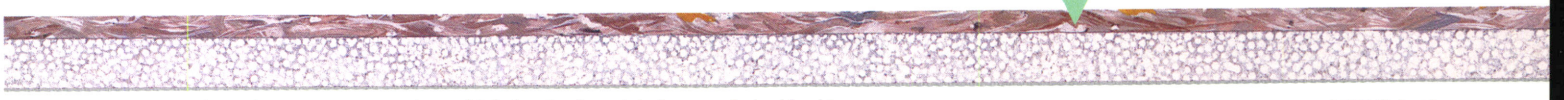


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Perspectives *(continued from page 137)*

P/A: How do you instill a sense of collectivity, or mutual civic responsibility, without addressing hierarchy in urban design?
WP: I don't believe you can solve that by architecture. I think this is one of the biggest mistakes we can make, to believe that architecture can force you to do something. This is the danger of architecture, it can block things but is unable to induce things.

This is another thing I would like to mention, how psychological problems are connected to architecture. We come from Vienna, the city of Freud. Everyone loves the Ringstrasse in Vienna. Now, I didn't know [anything about] the history of psychoanalytical theory until I went into a Ringstrasse building, which is a model for a lot of Classicist architecture. I looked at the floor plan and I immediately understood why Freud invented the theory in Vienna, because if you look at the plan you could read the neurotic circumstances which came directly from this neurotic society of the 19th

"What I don't like here in the States is the separation of city planning and building."

Century, which later led directly to the two world wars. If you look at the plan, you can see this neurotic lifestyle: the bedroom of the son was connected to the maid's room, and you can read the headache of the madame, who is serving tea in the salon.

This was a bourgeois society, which had all these problems on one hand, but on the other hand, pretended to be the most moralistic. So, this has to do with emotion and sexual fantasies, like Freud proved it, and it is completely readable in the architecture. Looking at the architecture in the Third Reich, I can see immediately where it came from, and what happened. And I'm afraid that everyone likes the 19th Century again. . .

P/A: The term Classical implies the product of a perfected civilization, which is exclusive of any other civilization. Does that make it inherently racist?
WP: That's it, that's the point.
P/A: You are removing the discussion of Classicism away from style into another arena that is *a,* applicable to domestic architecture, and *b,* has more to do with movement, configuration, and spatial qualities.
WP: You're using the terms I should use. This is our attitude. Because the discussion in architecture is getting superficial in this arena, we always say in interviews that we are not interested in architecture, because I really can't talk about columns.

"In the last couple of years people lost a lot of civic courage. . . . They want to remodel cities into villages."

P/A: What is the status of the new urban design project near Vienna?
WP: We are negotiating. Of course we broke every rule, every building code rule for everything – height, zoning, and things like that. Now we are negotiating every disobedience.
P/A: Do you think this is the way that meaningful work can get done – through the private sector?
WP: Basically politicians are cowardly. Of course, they want to be elected again, so that means they are looking for opinion polls. This is a bit of a problem. In the last couple of years people lost a lot of civic courage. They want to tear down buildings and plant trees because the trees are our friends. . . They want to remodel cities into villages, and this comes close to a closed society again. The village is beautiful, so *healthy.* Everyone knows what you are doing. ■

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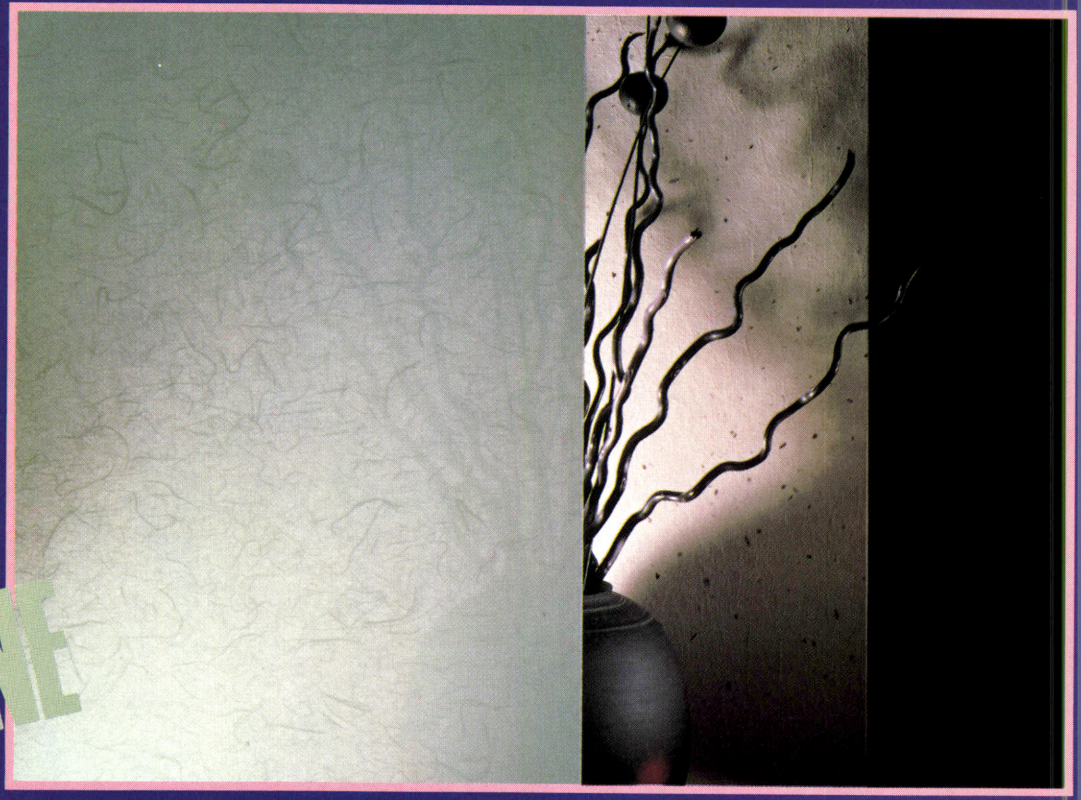
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Books *(continued from page 141)*
means that she concentrates on Bombay and Delhi. The resulting picture is lop-sided as it does not, in fact, cannot address Le Corbusier or Louis Kahn in any depth, for their works were done in Chandigarh and Ahmedabad. By the same token, emergent centers of great importance such as Bhopal and Bangalore go untouched. It is also quite strange to have a chapter with this title that says nothing whatever about Balkrishna Doshi, especially as he is an architect who has attempted with some success to bridge the gap between architecture and urbanism. And how very odd to find nothing at all on the American Joseph Allen Stein, who has contributed several works of great sensitivity to New Delhi and whose reflections on decentralization are quite central to Evenson's theme. This is what can happen when the agendas become too numerous or get mixed up.

Charles Correa's *The New Landscape: Urbanisation in the Third World* is a pamphlet of fresh first-hand observations on the plight of cities in the so-called "developing world." The author has grappled with such questions in India and elsewhere for three decades; his book is perhaps evidence that he gets over jet lag quickly enough. Correa maintains that urbanization with related urban poverty is one of the key political issues of the moment and that it will become an increasingly explosive one in the decades to come. Anyone who knows the realities of slums in Bombay, Mexico City, Rio de Janeiro, Calcutta or, come to that, New York, will surely have to agree with him. And neither the pieties of planners nor the brute forces of the market do much to guarantee even a decent quality of life for the greater mass.

Correa's book is assembled from a series of vignettes and reflections on such topics as "Equity," "Space as a Resource," "Mobility," and "Political Will." The message of the text is reinforced by a telling montage of images, such as the unforgettable picture of two poor Indians sitting face-to-face in a cylindrical concrete pipe lying temporarily by the railway line. This carries the caption "sharing a cup of tea. Note the excellent location – flanked by public transport." Throughout, the author tries to get beneath the surface of the Third World city; he tries to understand what people are doing to survive and how they take care (or fail to take care) of basic needs. Rather than imposing solutions from above, Correa seems to think that one must harness the existing energies to encourage a degree of economic self-sufficiency in squatter areas, with local trades popping up as in villages. These are tricky political questions, and one of the dangers of treating urban poverty as a sort of natural organism is that it can avert attention from crass exploitation (inflicted by the poor on the poorer as well as by the rich on the poor). Moreover, it could lead one to forget the need to re-invigorate the rural base by "urbanizing" it to a degree.

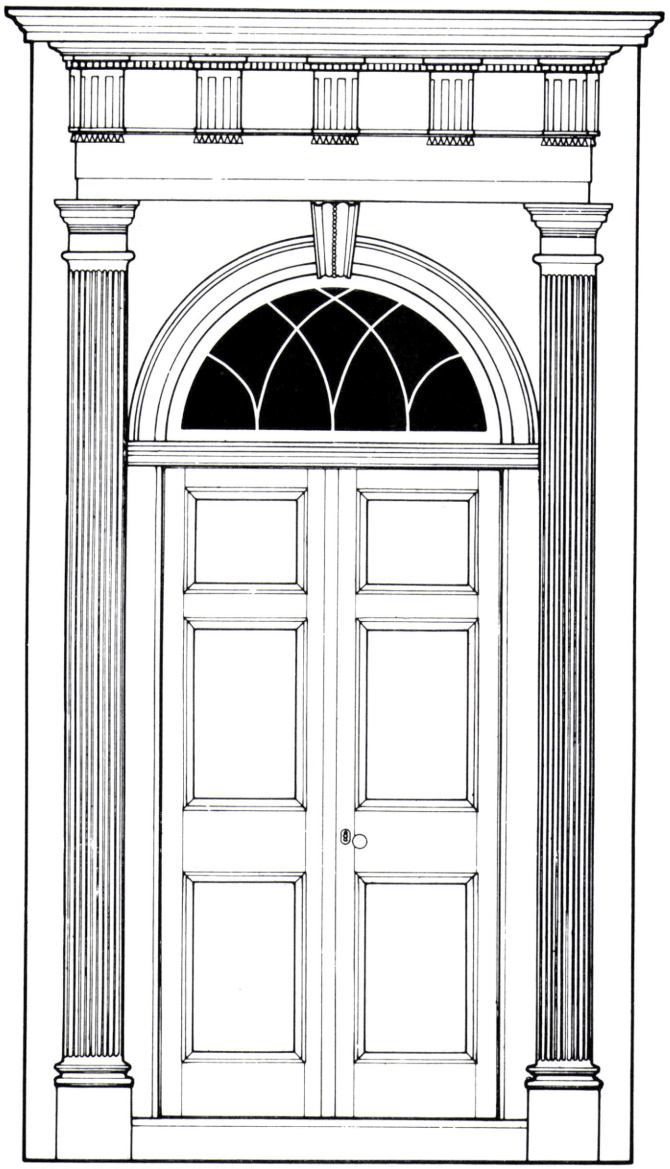
Curiously enough, Correa's graphic method of montage seems to owe more than a little to Le Corbusier's book *The Radiant City,* but his conclusions are of course, quite different. Le Corbusier's fetish was that one would handle and create high density by erecting tall buildings. Correa argues that the whole point and opportunity of informal squatter developments is that they show how high density can be achieved with low-rise structures inter-connected by a weave of open-air or half-covered spaces of multiple use. In other words, the shack built by the people and for the people carries within it the centuries old ways for handling certain climatic and social problems of design. In these conditions, the role of the architect apparently becomes that of an orchestrator of services, cheap technologies, existing skills, and pattern languages. The architect guides the inevitable towards a more hu-

(continued on page 182)



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Books *(continued from page 181)*

mane and effective result. Some will see this as a cop-out; others will see it as common sense.

In contrast to these fundamental human issues, Giles Tillotson's *The Tradition of Indian Architecture* takes us off into the rather rarified atmosphere of stylistic analysis. This is of the old-fashioned variety in which motifs are compared and contrasted, and in which visual analysis rests on the surface. As if to underline the point, there are very few plans, and the photographs give little sense of the site or context. The author supplies an overview of Indian architecture since the late 19th Century: He traces the growing impact of Western styles, the variety of late 19th-Century attempts at reviving or transforming earlier Indian architecture, the debates surrounding the architecture of New Delhi, and, finally, the impact of Modern architecture in the period since independence.

"Disjunction, continuity, and transformation are all basic to the history of Indian architecture."

Tillotson's work is at its most useful when resting within the confines of a narrative based upon documentary sources, individual buildings, and recorded discussions on reasons why one style rather than another was felt appropriate. He is on shakier ground when he speculates on abstruse notions of "Indian identity" or when he returns time and again to the idea of "tradition" without ever defining what he means. This is a real problem with India, because there are so many different periods and forms to choose from, combine, or transform. So, even at the end of the book, we still do not have a very clear notion of what the author means by "The Tradition of Indian Architecture." What we do learn is that virtually everyone designing since 1800 fails, by Tillotson's nebulous standard, to refer enough to "The Tradition."

Embedded in the book, then, is a sort of polemic against the impact of foreign influences, whether these come from British imperialism or from international Modernism. There is the specter of some "clean" indigenous core which has to be recovered. Unfortunately, this model of tradition is also misleading for India, because it is a place in which numerous invasions of forms in the past have gradually been transmuted and given a distinctive character. Disjunction, continuity, and transformation are all basic to the history of Indian architecture.

The villain of the piece is, of course, Le Corbusier, who stands accused of distancing the Indians still further from their lost "tradition" just at the moment (according to Tillotson) when they should have been recovering it. The current reviewer also stands accused for having demonstrated (with the aid of documentary evidence, let it be noted) that Le Corbusier was in fact interested in, and probably influenced by several individual works and building types from the Indian past. Of course, this worked at a level much deeper than stylistic motifs and similarities. Tillotson's version of tradition invokes standard Post-Modern shibboleths and prejudices on "legibility" in historical references: Things have to look like precedents; otherwise they do not count.

This review began with the observation that interest in Indian architecture ten years ago was rather slight. Now the opposite is the case and there is a flood of publications, from coffee table books to scholarly tomes. The books mentioned here give some idea of the serious range and of the dangers involved when the historian gives way to the temptations of intellectual fashion or sermonizing. **William J.R. Curtis** ■

The author wrote Modern Architecture Since 1900; Le Corbusier: Ideas and Forms; *and* Balkrishna Doshi: an Architecture for India.

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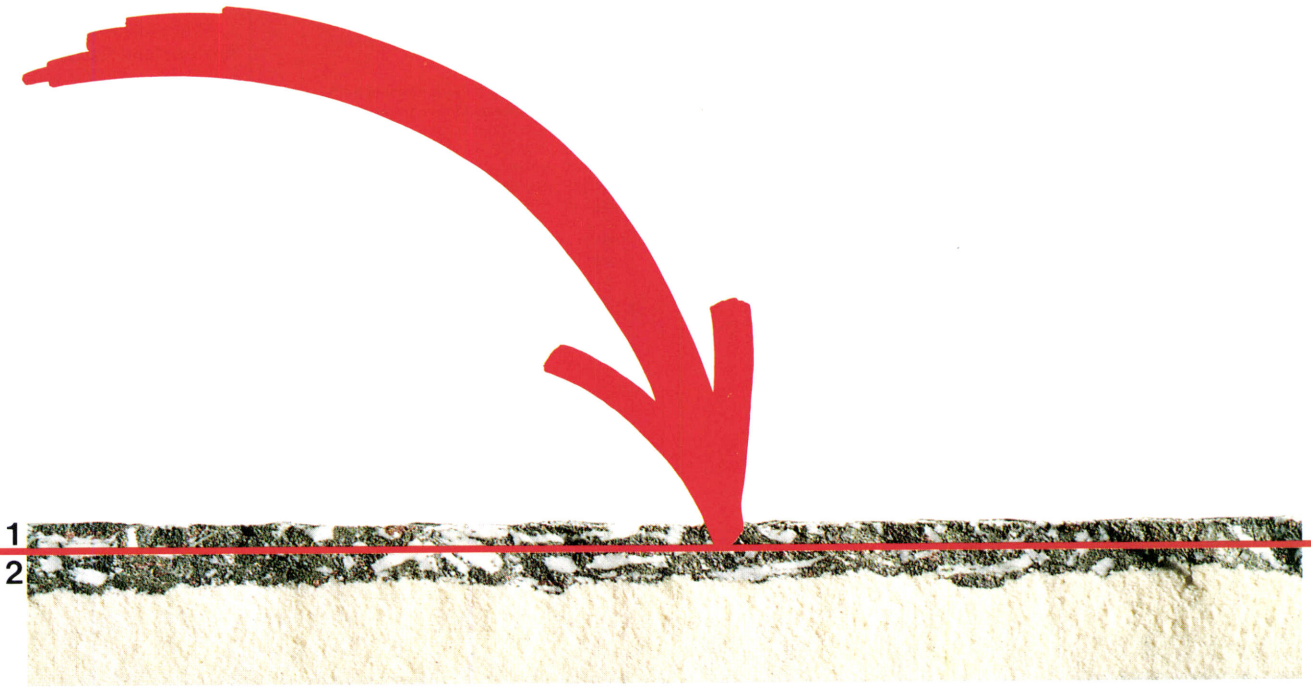
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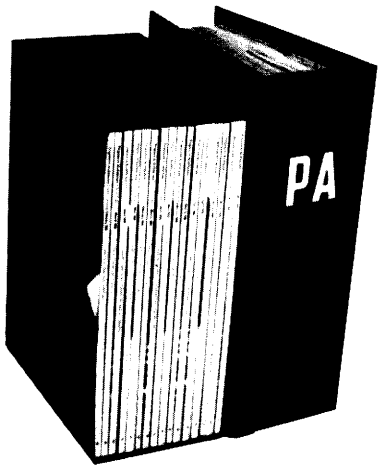
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Furthermore . . .

Coming Attraction

"Morty? Listen, I've got a mega-summer-movie idea for you. You're gonna love it, 'cause it's really tuned in to what's hot right now. You know, you got your Harrison Ford movie where the slimy criminal lawyer gets shot in the head and becomes a better person? And the William Hurt flick with the callous doctor that gets a tumor and becomes a better person? And then Michael J. Fox as a cocky doctor that wrecks his car, gets stranded in South Carolina taking care of squash farmers, and becomes a better person? I don't have to tell you this is a trend, Morty. Anyway, I've been wracking my brain and I think I have an original take on this. No, wait, stay with me, Morty.

"Okay, so we've got this architect, see... That's right. Think *Jungle Fever*. Think *The Fountainhead*... Anyway, the architect is one of these prima donna types, just wants the cover of those glossy magazines, doesn't care about the people that use his buildings. Then, one day he accidentally impales himself on some spiky steel thing in one of his own buildings, okay? So the guy's near death, but then he makes a full recovery. Except, and here's the thing that makes it so '90s: When he recovers, he closes his fancy office and starts designing affordable housing. Yeah, he has meetings with the tenants; we see little boys and girls telling him how they want their playground, ragged-looking (but not unattractive) single mothers helping him plan a kitchen, and damned if the guy doesn't turn into a regular saint... Okay, Morty, I understand your skepticism. I can respect that. But I don't mind telling you that Mike Eisner is *very* interested ..."

Les Pages Jaunes

P/A correspondent Thomas Vonier is now spending about half his time in Paris, and one of his first reports to us concerns that city's Yellow Pages. Vonier informs us that the city has three thick volumes of *les pages jaunes*, including over 14 pages of architects in minuscule type, or an estimated 2850 listings.

New York, by comparison, has about 1400 listings for architects, but doesn't have anything roughly equivalent to *Architectes sans Frontières*, an architectural counterpart to the French organization that sends volunteer medical doctors to war zones and disaster sites throughout the world. Other oddities include *S.O.S. Architectes*, an outfit that one presumes helps Parisians who are in a hurry; and the first listing, which begins with "AAA" – a technique also employed by plumbers and tow-truck operators, apparently the world round.

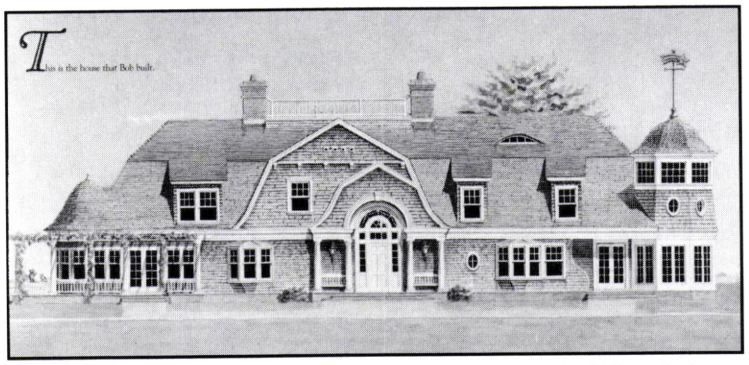


Rizzoli

From Moore's Beauty and the Beast.

See Bob Draw

Are your kids bored with Beatrix Potter and Paddington Bear? Are you looking for a more accessible vehicle than P/A to teach the young ones what you do for a living? For $17.95 each, Rizzoli is now offering children's storybooks by John Hejduk, Charles Moore, Robert A.M. Stern, and Stanley Tigerman (with his wife, Margaret McCurry, and daughter, Tracy). Who but an architect (Moore) would illustrate *Beauty and the Beast* with a palace – in section? And who but Stern would include a scale-model Villa Rotonda in the nursery of the Shingle-style *House that Bob Built?* ■



Rizzoli

The House that Bob Built *includes "... stairs that let you climb/Outside the room where eight can dine."*

P/A in October...

In October, P/A will feature new museums in Frankfurt by such architects as Hans Hollein, O.M. Ungers, Behnisch & Partners, Gustav Peichl, and Richard Meier. The boom in museum construction is part of the city's bid to become the cultural capital of united Germany. Other design features will include:

... a dormitory, a stadium, and a parking garage at Carnegie Mellon University by Dennis, Clark & Associates and TAMS Consultants – the first buildings erected under the 1988 campus plan, which won a citation in the 1989 P/A Awards.

... Elbasani & Logan's rehabilitation of the Mission Inn, a landmark hotel in Riverside, California.

The problem of appropriate lighting for computer screens will be the subject of a Technics article. A computer focus will discuss CAD management, intelligent buildings, and 3-D modeling.